

EXHIBIT 4.9

FERC FEIS for MIDSHIP Project (continued)

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Midship Pipeline Company, LLC
Midship Project

Resource Report 6 – Geological Resources
Karst Mitigation Plan (Revised)

Docket No. CP17-458-000

September 2017

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ACRONYMS AND ABBREVIATIONS

Company	Midship Pipeline Company, LLC
Contractor	Prime Pipeline and/or Facility Contractor and any Subcontractor
Project	Midship Project
ROW	right-of-way

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1.0 INTRODUCTION

Midship Pipeline Company, LLC's ("Company's") proposed Midship Project ("Project") will consist of a new-build pipeline system that will transport gas out of the South Central Oklahoma Oil Province and the Sooner Trend Anadarko Basin Canadian and Kingfisher plays in Oklahoma, to existing natural gas pipelines near Bennington, Oklahoma. Approximately 233.1 miles of pipeline will be constructed, along with three (3) compressor stations, one (1) booster station, and other appurtenant facilities.

This Karst Mitigation Plan outlines the procedures that the Contractor will adhere to if karst terrain is encountered while implementing construction activities along the Project right-of-way ("ROW") and at aboveground facility sites. The Contractor will be required to document the geographic locations of all karst features by milepost and submit a detailed report of the karst features and mitigation measures utilized.

The following definitions apply herein:

- **Company** – The Company's authorized employees, or authorized representatives including, but not limited to, engineering, environmental representatives, land agents, construction management, and inspection services.
- **Contractor** – The Prime Pipeline and/or Facility Contractor and any subcontractor. The Prime Contractor is ultimately responsible for the actions of its employed subcontractors.

2.0 OBJECTIVE

This Karst Mitigation Plan is intended to outline procedures that may be implemented to support construction and operation in areas where karst features are encountered during construction. As described in Resource Report 6, Section 6.4.3, avoidance will be the primary measure to mitigate karst features.

3.0 GENERAL REQUIREMENTS

Prior to implementing any karst mitigation measures, the Contractor shall provide the Company with appropriate information documenting the karst feature(s) and the proposed mitigation measures to be conducted. The mitigation measures must be reviewed by an engineer representing the Company. The engineer will analyze the data and will make recommendations and/or forward approval to the Company before mitigation may commence.

Karst mitigation measures shall be performed with a Company Construction Inspector present. Approval does not relieve the Contractor from responsibility or full liability while implementing the mitigation measure.

4.0 KARST MITIGATION MEASURES

Karst features have not been identified along the pipeline routes or at the compressor station sites during field environmental surveys or desktop analyses (literature review of potential karst formations; aerial photography review of potential karst areas). However, if a buried karst feature is encountered during construction, options will be to 1) move the pipeline route or facility site to avoid the feature or 2) depending on the results of geotechnical evaluations (if necessary), develop an engineering design solution that will allow construction to continue at the original location.

During operations, the pipeline is designed to withstand without damage if a sinkhole forms. Intrinsic span capabilities of the pipeline segments are summarized below. Calculations are provided in Attachment A.

- Mainline, 0.875-inch pipe wall thickness = 100 feet
- Mainline, 0.688-inch pipe wall thickness = 96 feet
- Mainline, 0.476-inch pipe wall thickness = 78 feet
- Chisholm, 0.625-inch pipe wall thickness = 75 feet
- Chisholm, 0.397-inch pipe wall thickness = 68 feet
- Velma, 0.321-inch pipe wall thickness = 52 feet
- Velma, 0.250-inch pipe wall thickness = 42 feet

Potential engineered karst mitigation measures are presented below.

4.1 Measures to Avoid and Minimize Impacts to Karst Features and Caves

In all work areas, the protection of known and potential karst features (including sinkholes, caves, sinking or losing streams, swallow holes, and springs) will be in accordance with the Federal Energy Regulatory Commission's *Upland Erosion Control, Revegetation, and Maintenance Plan* and its *Wetland and Waterbody Construction and Mitigation Procedures* (2013). Sediment and erosion control methods in these plans will be deployed in such a way as to prevent runoff from entering karst features.

Buffer zones of 300 feet will be established around surficial expressions of any karst features in all work areas. During all construction earthwork activities, these zones will be clearly marked in the field with signs and safety fencing (or similar barrier depending on the feature).

All excavation activities will be completed to minimize alteration of the existing grade and storm water flow to the karst features.

In linear excavations adjacent to karst features, spoils will be placed on the opposite side of the trench from the karst features. In the event of storm water erosion during construction, the soil will flow either flow into the excavation (upslope spoil pile) or away from the trench (downslope soil pile) and not toward the karst features.

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Stormwater control measures will include detention, diversion, or containerization to prevent construction influenced stormwater from flowing to the karst feature drainage points (or throats). Drainage points in karst features will not be used for the disposal of water.

Hydrostatic test water from a new pipe will not be discharged directly into the buffer zone of a karst feature. This water will be discharged downgradient of the karst feature. If site conditions prevent a downgradient discharge, the water will be discharged as far from the karst feature buffer zone as is practicable, and the discharged water will be filtered and subjected to sediment and erosion control. Post-construction monitoring will ensure proper re-vegetation and restoration of these areas.

4.2 Sinkhole Mitigation

The Company will conduct awareness training for karst-like features during Supervisor Staff environmental training, including buffer zone requirements for known karst features. The Chief Inspector, Craft Inspectors, Safety Inspector, Lead Environmental Inspector, and Environmental Inspectors will be aware of the potential for unanticipated karst features, including sinkhole formation, during construction and trained to identify the signs of sinkhole formation.

Signs of sinkhole formation and the presence of sinkholes will be immediately and clearly marked and a karst buffer zone established. Evaluation of the area will be conducted by appropriate engineering and construction staff. Avoidance of the area may be possible by a minor route variation or by prohibiting equipment from using the temporary workspace in the immediate area.

Should unknown sinkholes be encountered during construction, the following mitigation measures may be undertaken:

- Route the pipeline away from sinkholes.
- Use a thicker-walled pipe.
- Remediate the sinkhole.

Several options are considered viable for remediation/mitigation of sinkholes and depressions along the Project pipeline facilities and are described in the following sections.

4.2.1 Inverted Filter Approach for Pipeline Excavation Structural Zones

For this option, the sinkhole would be excavated until the throat of the underlying bedrock is encountered. On occasion, the throat may not be fully identified. Geophysical methods might be used to further assess conditions. Once the throat location is identified, a field decision regarding the more suitable repair method would be developed. This approach is anticipated for those cases in which the pipeline traverses directly across the bottom or near the throat of a sinkhole. Geophysical methods that may be used for karst imaging include:

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- Electrical resistivity.
- Seismic refraction and reflection.
- Ground penetrating radar.
- Multichannel analysis of surface waves.
- Electromagnetics.
- Gravity survey.

If the inverted filter approach is selected, a non-woven geotextile fabric and large (typically one- to two-foot diameter size) rock would be placed initially to establish a working base and fill the sinkhole bottom and/or throat. Layers of progressively smaller size rock would then be placed at an appropriate elevation to allow placement of well-compacted structural soil fill. After placement of stone is complete, the stone filter backfill would be wrapped with the geotextile and the excavation capped with well-compacted soil fill to achieve proposed subgrade elevation.

4.2.2 Concrete Plug Approach for Pipeline Excavation Structural Zones

This approach would initially consist of excavating and cleaning out the throat or open void to allow placement of a concrete plug, consisting of flowable fill. Depending on the size and shape of the throat opening, it may be prudent to initially place graded stone within the throat area. The concrete plug would be installed such that it is bonded to adjacent bedrock. The thickness of the concrete plug would be based on field observations, but in general, the thickness should be at a minimum of two (2) times the width of the plug. Large rock fill may be incorporated into the flowable fill to reduce the overall volume of flowable fill material.

After curing, the remaining site area will be filled with well-compacted soil, if required to achieve proposed subgrade elevation. This approach is anticipated for those cases in which the pipeline traverses directly across sinkhole voids/openings in non-closed depression areas that typically do not receive normal storm water flow (e.g., along a hillside) or if an unanticipated opening is identified during pipeline excavation.

4.2.3 Large Rock Placement in Cave or Opening

In cases where the pipeline will traverse a large open void or cave feature, stabilizing and filling the large opening would be implemented to minimize disturbance of the underlying cave feature or large open void. Initially, large rock (several feet in diameter) will be securely placed and wedged into the opening or cave feature. Additional angular rock (up to two feet in size) may be placed prior to placement of a nonwoven filter fabric. The remaining depth may be capped with No. 1 stone, suitable graded rock, and soil backfill to achieve proposed subgrade elevation.

4.2.4 General Site Filling Approach

In some cases, pipeline construction will necessitate the backfilling of certain site features (i.e., closed depressions without visible openings/voids at the ground surface and depressions with karst voids or

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openings exposed to ground surface) in order to facilitate construction and installation of the pipeline. These closed depressions or karst features typically will be located within the construction right of way of the Project but not within the actual pipeline excavation zone or pipe non-structural zone.

Backfill activity for both situations would consist initially of vegetation removal and placement of a geogrid and non-woven filter fabric across the footprint of the site feature to be backfilled. Large angular rock (up to two feet in diameter) may be placed over the geogrid and geotextile. Placement of a layer of No. 1 size stone over the large angular rock may be utilized (if required) and will be based on field decision at the time of construction.

The goal of this remediation/mitigation approach will be to minimize the overall impact to natural/existing storm water infiltration/recharge rates and flow direction.

4.2.5 Above-Ground Facilities (Compressor, Booster, and Meter Stations)

Measures to assure structural integrity in the facility areas include using support systems similar to other industrial facilities established over karst conditions, such as reinforced grade beams and slabs capable of spanning small drop outs. The heavily reinforced grade beams and slabs can be shimmed/jacked into place after completion of hole in-filling and compaction grouting. Alternatively, facilities can be supported by deep foundations (pits or drilled shafts) that extend into competent rock.

In addition, storm water, which is a common triggering mechanism of sinkhole collapse in areas being developed, will be directed away from buildings and equipment foundations.

4.3 Route Surveillance

As required by 49 Code of Federal Regulations, Part 192.613, the Company will conduct route surveillance during construction and operation of the facilities, and surveillance personnel will be trained to monitor the pipeline ROW for evidence of subsidence, surface cracks, or depressions that could indicate sinkhole formation. Should any of these indicators be identified, the Project geotechnical engineer will be notified and will determine the appropriate method of remediation/mitigation. In extreme instances, the affected pipeline segment will be excavated, repositioned, or replaced to a stress-free state and properly bedded and backfilled to pre-construction contours.

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APPENDIX I
BLASTING PLAN

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Midship Pipeline Company, LLC

Midship Project

Resource Report 6 – Geological Resources

Blasting Plan

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1.0 INTRODUCTION

This Blasting Plan outlines the procedures and safety measures that the Contractor will adhere to while implementing blasting activities along the Midship Pipeline Company, LLC (“Company”) Midship Project (“Project”) right-of-way (“ROW”). The Contractor will be required to submit a detailed Blasting Specification Plan to the Company that is consistent with the provisions of this Blasting Plan. The Contractor's plan, when approved by the Company, will be incorporated into the Contractor's scope of work.

The following definitions apply herein:

- **Company** – The Company’s authorized employees, or authorized representatives including, but not limited to, engineering, environmental representatives, land agents, construction management, and inspection services.
- **Contractor** – The Prime Pipeline and/or Facility Contractor and any subcontractor, including the blasting contractor employed by the Prime Contractor. The Prime Contractor is ultimately responsible for the actions of their employed subcontractors.

2.0 OBJECTIVE

This Blasting Plan is intended to identify blasting procedures, including safety, use, storage, and transportation of explosives that are consistent with minimum safety requirements as defined by the most current federal, state, local and other codes. This may include but is not limited to:

- 27 CFR Part 181 - Commerce in Explosives
- 49 CFR Part 177 - Carriage by Public Highway
- 29 CFR 1926 Subpart U - Blasting and Use of Explosives (applicable sections)
- 29 CFR Part 1910.109 – Explosives and Blasting Agents (Occupational Safety and Health Administration)
- ATF P5400.7 – Federal Explosive Laws and Regulations
- 18th or later version of the International Society of Explosives Engineers (“ISEE”) – Blaster’s Handbook
- State and local regulations, such as the Oklahoma Explosives and Blasting Regulation Act of Title 63 (Attachment 1), and the Oklahoma Underground Facilities Damage Prevention Act (Attachment 2)
- Cheniere Standard ES-PPL-7712-CU-0200 – Blasting for Pipelines and Facilities Specification

Additionally, this plan is intended to address environmental aspects of blasting activities, and identify areas of concern along the proposed pipeline segments and related facilities.

3.0 GENERAL REQUIREMENTS

Blasting operations shall be conducted by or under the direct and constant supervision of personnel legally licensed and certified to perform such activities in the jurisdiction where the blasting occurs. Prior to any blasting activities, the Contractor shall provide the Company with appropriate information documenting the experience, licenses, and permits associated with all blasting personnel.

Blasting-related operations including: obtaining, transporting, storing, handling, loading, detonating, and disposing of blasting material; drilling, and ground-motion monitoring shall comply with all applicable federal, state, and local regulations, permit conditions and the construction contract.

Blasting for grade or trench excavation shall be used where deemed necessary by a construction expert after examination of the site, and in other locations only after other reasonable means of excavation have been used and are unsuccessful in achieving the required results. The Company may specify locations (e.g., foreign line crossings, near structures) where consolidated rock shall be removed by approved mechanical equipment such as rock-trenching machines, rock saws, hydraulic rams, or jack hammers in lieu of blasting.

Before blasting, a site-specific Blasting Specification Plan must be submitted by the Contractor to the Company for approval. The site-specific Blasting Specification Plan must be reviewed by an engineer representing the Company. The engineer will analyze the data to determine the combined stress level of each affected existing pipeline within the potential area of impact and will make recommendations and/or forward approval to the Company before blasting may commence.

Special blasting controls will be required if blasting is needed for waterbody crossings. The type of explosive, size of charges, sequence of firing, etc. will be selected to minimize shock wave stresses on aquatic life adjacent to the blasting area. If dry crossings are needed, matting will be used to control fly rock. In addition, where specified, the Contractor will furnish the necessary labor and equipment to employ air bubble curtains to protect nearby aquatic life from blasting shock waves. Air bubble curtains could be specified for both wet and dry crossings, depending on the aquatic life present. For wet crossings the air bubble curtains would be placed upstream and downstream of the blasting area. For dry crossings, the air bubble curtains would be in the dammed-off areas on either side of the pipe ditch.

Drilling and blasting shall be performed with a Company Construction Inspector present. Approval is required to proceed prior to each blast. Approval does not relieve the Contractor from responsibility or full liability.

4.0 PRE-BLASTING REQUIREMENTS

Prior to the initiation of blasting operations, the Contractor shall comply with the following:

- The Contractor will obtain all required federal, state, and local permits relating to the transportation, storage, handling, loading, and detonation of explosives.

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- The Contractor shall place all necessary "one calls" a minimum of 48 hours (2 normal working days M-F non-holiday) prior to construction where one-call systems are in place.
- The Contractor shall be responsible for the protection of all existing underground facilities.
- Before performing any work on, or accessing the ROW, the Contractor shall verify with the Company that all property owners have been notified of the impending construction and blasting activities.
- The Contractor shall submit to the Company representative their site-specific Blasting Specification Plan for approval prior to execution of any blasting activity.
- All blasting activities will take place during daylight hours.

5.0 SITE-SPECIFIC BLASTING PLANS

For each area determined to require blasting, a site-specific Blasting Specification Plan will be created. The Contractor's Blasting Specification Plan shall include at a minimum the following information:

- Blaster's name, company, copy of license, and statement of qualifications; seismograph company, names, equipment and sensor location
- Site location (milepost and stationing), applicable alignment sheet numbers, and associated rock type and geological structure (solid, layered, or fractured)
- Copies of all required federal, state, and local permits
- Methods and materials including explosive type, product name and size, weight per unit, and density; stemming material; tamping method; blasting sequence; use of non-electrical initiation systems for all blasting operations; magazine type and locations and security for storage of explosives and detonating caps
- Site dimensions including explosive depth, distribution, and maximum charge and weight per delay; hole depth, diameter, pattern, and number of holes per delay
- Dates and hours of conducting blasting, distance and orientation to nearest aboveground and underground structures; schedule identifying when blasting would occur within each waterbody greater than 10 feet wide, or within any wetlands, or designated sensitive waterways
- Blasting procedures for:
 - Storing, handling, transporting, loading, and firing explosives
 - Prevention of misfires, flying rock, fire prevention, noise, and stray current accidental-detonation
 - Signs, flagmen, and warning signals prior to each blast
 - Those locations where the pipeline route:
 - Parallels or crosses an electrical transmission corridor, cable or pipeline
 - Parallels or crosses a highway or road
 - Is within or adjacent to forested areas
 - Approaches within 150 feet of a water well or spring
 - Approaches within 1,000 feet of any residence, building or occupied structure
 - Local notification
 - Pre-blast inspections

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- Inspections after each blast
- Disposal of waste blasting material

6.0 MONITORING

During blasting operations, the Contractor will be required to monitor operations in the following manner:

- The Contractor shall provide seismographic equipment to measure the peak particle velocity ("PPV") of all blasts in the vertical, horizontal, and longitudinal directions. Seismic monitoring can only be discontinued if:
 - The blasting schedule and blasting performance consistently produce PPVs that are lower than the maximum allowable limit when measured at an adjacent pipeline; and
 - A Company representative provides written authorization
- The Contractor shall measure the PPV at any adjacent pipelines, at any water wells, potable springs and at any aboveground structures within 150 feet of the blasting
- The Contractor shall complete a Blasting Log Record immediately after each blast and submit a copy to the Company representative

7.0 LIMITS ON PEAK PARTICLE VELOCITY (PPV)

Any proposed blast shall be monitored to ensure that the PPV shall not exceed the specified maximum velocities. Maximum velocities are: 4 inches per second measured adjacent to an underground pipeline or structures and 1.5 inches per second for any aboveground structures including water wells.

For all aboveground facilities within 150 feet of the blasting, the Contractor shall provide additional seismograph equipment to determine the PPV at the aboveground facility. If the measured PPV at an existing pipeline or other structure exceeds the above limits, the Contractor shall stop blasting activities immediately and notify the Company Representative. The Blasting Plan must be modified to reduce the PPV prior to any further blasting.

The frequency caused by the detonation of explosive charge shall not drop below 25 hertz without the review and approval of the designated Company Representative.

The minimum time delay between the detonations of charges shall be 8 milliseconds.

All blasting activity occurring within 300 feet of high pressure pipelines will require seismological surveillance (peak particle velocity and frequency) for every blast, unless otherwise agreed upon following the review of the blasting plan. Pipelines affected by blasting are to be leak surveyed in the affected area following the completion of the blasting operation. The Company will coordinate with and follow all federal, state, and/or local regulatory agency laws regarding PPV limits.

Limits on PPV for surface structures are based on studies which established the limits at which plaster in homes will crack. The primary purpose of the limit is to prevent damage to homes. The Company may increase the limit for other structures such as steel transmission line towers, as appropriate. The

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designated Company Blasting Representative may approve higher velocities for given site-specific conditions in advance.

8.0 SAFETY

8.1 PROTECTION OF ABOVEGROUND AND UNDERGROUND STRUCTURES

Where blasting is determined to be required, the Company will identify any municipal water mains proposed for crossing, and will consult the local water authority. Reports of identified crossings will include location by milepost, owner, and status and results of contacts with the water authority.

The Contractor will exercise control to prevent damage to aboveground and underground structures including buildings, pipelines, utilities, springs, and water wells. The Contractor will implement the following procedures:

- If blasting occurs within 150 feet of identified water well or potable springs, water flow performance, and water quality testing will be conducted before blasting. If the water well or spring is damaged, the well or spring will be repaired or otherwise restored or the well owner will be compensated for damages. The Company will provide an alternative potable water supply to the landowner at the Contractor's expense, until repairs occur. Locations of known water wells or systems within 150 feet of the construction work area are indicated on the Company's construction alignment sheets.
- If blasting occurs within 150 feet of any aboveground structures, the Contractor and the Company representative will inspect structures before and after blasting. In the unlikely event that damage occurs to the aboveground structure, the owner will be compensated by the Contractor.
- The Contractor shall be responsible for the ultimate resolution of all damage claims resulting from blasting. Such liability is not restricted by the 150-foot inspection requirement cited above.
- Blasting will not be allowed within 15 feet of an existing pipeline, unless specifically authorized by the Company.
- Holes that have contained explosive material shall not be re-drilled. Holes shall not be drilled where danger exists of intersecting another hole containing explosive material.
- Blasting mats or padding shall be used on all shots where necessary to prevent scattering of loose rock outside of the approved construction workspace areas and to prevent damage to nearby structures and overhead utilities.
- Blasting shall not begin until occupants of nearby buildings, residences, places of business, places of public gathering, and farmers/ranchers have been notified by the Contractor sufficiently in advance to protect personnel, property, and livestock. The Contractor shall notify all such parties at least 48 hours (2 normal working days M-F non-holiday) prior to blasting.
 - The Company shall work with ranchers to relocate livestock and other animals to safe areas away from the blast zone to prevent injury to the livestock or to prevent stampeding of the livestock as the result of the blast.

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- Blasting in or near environmentally sensitive areas such as streams and wildlife areas may include additional restrictions.
- All blasting shall be subject to the following limitations:
 - Maximum PPV of 4 inches per second for buried pipelines or structures or 1.5 inches per second for any above grade structures including water wells in any of three mutually perpendicular axes, measured at the lesser distance of the nearest facility or the edge of the permanent easement
 - Maximum drill size shall be 2.5 inches unless approved by the Company
 - Maximum quantity of explosive per delay shall be governed by the recorded measurements as influenced by work site conditions
 - Explosive agents and ignition methods shall be approved by the Company. Ammonium Nitrate Fuel Oil and other free flowing explosives and blasting agents are not acceptable and shall not be used
 - Drill holes shall not be left loaded overnight
 - Good stemming material is to be used in all holes
- The drilling pattern shall be set in a manner to achieve smaller rock fragmentation (maximum 1 foot in diameter) to use as much as possible of the blasted rock as backfill material after the pipe has been padded in accordance with the specifications. The Project specifies that no rock greater than three inches in diameter is to be used in backfill unless approved by the Company. The Contractor shall submit the proposed drilling pattern to the Company for approval prior to implementation.
- Under pipeline crossings and all other areas where drilling and blasting is required within 15 feet of existing oil and gas facilities (as approved by the Company):
 - Drill holes shall be reduced to a maximum of 2 inches or less in diameter
 - The number of holes shot at one time shall be limited to three unless otherwise approved by the Company
 - Appropriate delay between charges to attain desired fragmentation

8.2 PROTECTION OF PERSONNEL

The Contractor shall include in its procedures all federal, state, county, and local safety requirements for blasting. The Contractor's procedures shall address, as a minimum, the following requirements:

The Contractor shall take sole liability for property damage, injury or fatalities to people and livestock caused by blasting operations.

- Only authorized, qualified, and experienced personnel shall handle explosives.
- No explosive materials shall be located where they may be exposed to flame, excessive heat, sparks, or impact. Smoking, firearms, matches, open flames, and heat and spark-producing devices shall be prohibited in or near explosive magazines or while explosives are being handled, transported, or used.

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- A code of blasting signals shall be established, posted in conspicuous places and utilized during blasting operations. Contractor training including those directly involved in the blasting operations and all other persons involved in the project (e.g., the Company and their authorized representatives and other Contractor personnel) shall be conducted on the use and implementation of the code.
- The Contractor shall use every reasonable precaution including, but not limited to, visual and audible warning signals, warning signs, flag person, and barricades to ensure personnel safety.
- Warning signs, with lettering a minimum of four inches in height on a contrasting background, will be erected and maintained at all approaches to the blast area. Contractor personnel may need to be in place at these locations just prior to the blast through the "ALL CLEAR" if there is a high likelihood of people entering the blast area.
- Flaggers will be stationed on all roadways passing within 1,000 feet of the blast area to stop all traffic during blasting operations.
- All personnel not involved in the actual detonation shall stand back at least 1,000 feet and workers involved in the actual detonation shall stand back at least 650 feet from the time the blast signal is given until the "ALL CLEAR" has been sounded.
- No loaded holes shall be left unattended or unprotected at any time including overnight.
- No explosives or blasting agent shall be abandoned.
- In the case of a misfire, the blaster shall provide proper safeguards for personnel until the misfire has been re-blasted or safely removed.
- The exposed areas of the blast will be matted wherever practicable. In cases where such a procedure is not deemed to be feasible, the Contractor will submit an alternative procedure for review by the Company and the site in question must be visited and examined by the designated Company Blasting Representative before any approval is granted.
- The Company may employ two-way radios for communication between vehicles and office facilities. The Contractor shall advise the Company and other pipeline contractors of any need to cease use of such equipment during blasting activities.
- All loading and blasting activity shall cease and personnel in and around the blast area will retreat to a position of safety during the approach and progress of an electrical storm irrespective of the type of explosives or initiation system used. **THIS IS A MAJOR SAFETY PRECAUTION AND WILL ALWAYS BE OBSERVED.** All explosive materials, all electrical initiation systems, and all non-electric initiation systems are susceptible to premature initiation by lightning.
- Previous blast areas must be inspected to verify the absence of misfires. No drilling may commence until such inspection occurs. If a misfire occurs adjacent to a hole to be drilled, the misfire will be cleared by the blaster using whatever techniques are called for by the situation prior to commencement of drilling. If a misfire occurs at some distance from the drilling area, drilling may be stopped while clearing preparations are underway. When the misfire is to be cleared by re-shooting, drilling will be shut down and personnel evacuated to a place of safety prior to detonation.

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- All transportation of explosives will be conducted in accordance with applicable federal, state, and local laws and regulations. Vehicles used to transport explosives shall be in proper working condition and equipped with tight wooden or non-sparking metal floor and sides. If explosives are carried in an open-bodied truck, they will be covered with a waterproof and flame-resistant tarpaulin. Wiring will be fully insulated to prevent short-circuiting and at least two fire extinguishers will be carried. The truck will be plainly marked to identify its cargo so that the public may be adequately warned. Metal, flammable, or corrosive substances will not be transported in the same vehicle with explosives. There will be no smoking and unauthorized or unnecessary personnel will not be allowed in the vehicle. Competent, qualified personnel will load and unload explosives into or from the vehicle.
- No sparking metal tools will be used to open kegs or wooden cases of explosives. Metallic slitters will be used to open fiberboard cases, provided the metallic slitter does not come in contact with the metallic fasteners of the case. There will be no smoking, no matches, no open lights, or other fire or flame (including welding) nearby while handling or using explosives. Explosives will not be placed where they are subject to flame, excessive heat, sparks, or impact. Partial cases or packages of explosives will be re-closed after use. No explosives will be carried in the pockets or clothing of personnel. The wires of an electric blasting cap shall not be tampered with in any way. Wires will not be uncoiled. The use of electric blasting caps will not be permitted during dust storms or near any other source of large charges of static electricity. Uncoiling of the wires or use of electric caps will not be permitted near radio-frequency transmitters. The firing circuit will be completely insulated from the ground or other conductors.
- No blast will be fired without a positive signal from the person in charge. This person will have made certain that all surplus explosives are in a safe place; all persons, vehicles, and/or boats are at a safe distance; and adequate warning has been given. Adequate warning of a blast will consist of, but is not limited to, the following:
 - Notification to nearby homeowners and local agencies, if necessary
 - Stop vehicular and/or pedestrian traffic near the blast site
 - Signal given by an air horn, whistle or similar device using standard warning signals
- Only authorized and necessary personnel will be present where explosives are being handled or used.
- Condition of the hole will be checked with a wooden tamping pole prior to loading. Surplus explosives will not be stacked near working areas during loading. Detonating fans will be cut from spool before loading the balance of charge into the hole. No explosives will be forced into a bore hole past an obstruction. Loading will be done by a blaster holding a valid license or by personnel under his direct supervision.
- Should flying rock leave the ROW even after all necessary precautions have been taken, it shall be collected immediately and disposed of at approved disposal sites. This work shall not be left to the cleanup crew.

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8.3 PROTECTION OF THREATENED AND ENDANGERED SPECIES

- The Company will consult with state and federal agencies regarding areas proposed for blasting where sensitive habitats or species are known to occur. Areas identified as containing sensitive habitats or species, as directed by the appropriate agencies, will be staked and flagged. A qualified project biologist will survey the proposed blasting zone identified by the Pipeline Contractor immediately in advance of any drilling or blasting. Areas will be checked before and after blasting for the presence of sensitive species, and disturbance to species and habitats will be resolved in accordance with guidance provided by the appropriate agencies.

8.4 LIGHTNING HAZARD

- A risk of accidental detonation caused by lightning strikes exists at any time the workplace is experiencing an electrical storm and there are loaded holes on site. If this hazard is judged to exist by the Company representative, work shall discontinue at all operations and workers will be moved to secure positions away from the loaded holes. Furthermore, workers shall not return to the work site until the storm has passed and the Company representative has indicated it is clear to return.
- The Company's Contractor shall have on site and use approved lightning detectors capable of measuring the degree of electrical activity as a storm approaches, and the distance to the storm front from the instrument on the ROW such as:
 - SD-2508 manufactured by Electronics Division
 - S.D.I. International, Model 350 manufactured by Thomas Instruments Inc.
 - Skyscan Lighting Detector manufactured by Skyscan Technologies
 - Or approved equivalent

9.0 STORAGE REQUIREMENTS

- All explosives, blasting agents, and initiation devices shall be stored in locked magazines that have been located, constructed, approved, and licensed in accordance with local, state, and federal regulations.
- The storage of explosives, blasting agents and initiation devices is not permitted on the ROW and will only be stored at approved staging areas or construction yards.
- Magazines shall be dry, well-ventilated, reasonably cool (painting of the exterior with a reflective color), bullet and fire resistant, and kept clean.
- Initiation devices shall not be stored in the same box, container, or magazine with other explosives. Explosives, blasting agents or initiation devices shall not be stored in wet or damp areas; near oil, gasoline, cleaning solvents; near sources of heat radiators, steam pipes, stoves, etc. No metal or metal tools shall be stored in the magazine. There shall be no smoking, matches, open lights, or other fire or flame inside or within 50 feet of storage magazines or explosive materials. The loading and unloading of explosive materials into or out of the magazine shall be done in a business-like manner with no loitering, horseplay, or prank playing.

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- Magazines shall be kept locked at all times unless explosives are being delivered or removed by authorized personnel. Admittance shall be restricted to the magazine keeper, blasting supervisor, or licensed blaster. Magazine construction shall meet the requirements of Bureau of Alcohol, Tobacco and Fire Arms P5400.7 "Explosives Law and Regulations" and be in accordance with local, state, or federal regulations and the ISEE Blaster's Handbook.
- Accurate and current records shall be kept of the explosive material inventory to ensure that oldest stocks are utilized first, satisfy regulatory requirements and for immediate notification of any loss or theft. Magazine records shall reflect the quantity of explosions removed, the amount returned, and the net quantity used at the blasting site. Copies of these records are to be supplied at the end of the project or anytime requested by the Company throughout the project.
- When explosive materials are taken from the storage magazine, they shall be kept in the original containers until used. Small quantities of explosive materials may be placed in day boxes, powder chests or detonator boxes. Any explosive material not used at the blast site shall be returned to the storage magazine and replaced in the original container as soon as possible, but in any case before the end of the workday.
- Magazine locations shall be in accordance with local, state, or federal regulations. Where no regulations apply, magazines shall be located in accordance with the latest edition of the 18th Anniversary Edition of the Blaster's Handbook and ATF P5400-7 Explosives Law and Regulations. Magazines shall be marked in minimum three-inch high letters with the words "DANGER — EXPLOSIVES" prominently displayed on all sides and roof.

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Attachment 1
Oklahoma Explosives and Blasting Regulation Act of Title 63

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Source: http://oklegal.onenet.net/oklegal-cgi/get_statute?98/Title.63/63-122.1.html

63-122.1.

The provisions of this part shall be known and may be cited as the "Oklahoma Explosives and Blasting Regulation Act".

63-122.2.

The provisions of this section specify the jurisdictional areas of state agencies relating to the regulation of blasting and explosives. The jurisdictional areas of responsibility specified in this section shall be in addition to those otherwise provided by law and assigned to the specific state agency as follows:

1. Department of Mines. The Department of Mines shall have the following jurisdictional areas relating to the regulation of blasting and explosives:

- a. the use of explosives and blasting activities for surface and nonsurface mining operations pursuant to Title 45 of the Oklahoma Statutes,
- b. except as otherwise provided by this part, the use of explosives and blasting activities for nonmining activities,
- c. except as otherwise provided by this part, the regulation of the use of explosives or of blasting activity not subject to the specific statutory authority of another state agency;

2. State Fire Marshal. The State Fire Marshal shall have regulatory jurisdictional responsibility relating to explosives as follows:

- a. the regulation of the manufacture, sale, transportation for hire or storage of explosives or blasting agents for resale pursuant to Division 2 of the Oklahoma Explosives and Blasting Regulation Act,
- b. the examination of buildings and premises and reporting and orders authorized pursuant to Section 317 of Title 74 of the Oklahoma Statutes;

3. The Department of Public Safety. The Department of Public Safety shall have the regulatory jurisdictional responsibility relating to the transportation of explosives or blasting agents classified as hazardous materials pursuant to the Oklahoma Motor Carrier Safety and Hazardous Materials Transportation Act; and

4. Department of Environmental Quality. The Department of Environmental Quality shall have jurisdictional responsibility relating to the regulation and disposal of explosives or blasting agents classified as solid or hazardous waste pursuant to the Oklahoma Environmental Quality Code.

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63-123.1

A. Pursuant to the Oklahoma Explosives and Blasting Regulation Act, except as otherwise provided by this part, the Department of Mines shall be responsible for the administration, regulation and enforcement of all blasting operations or activities, and the storage and use of all blasting agents and explosives by any person, which is not located within the area of a mining operation or site.

B. Except as otherwise provided by this part, it shall be unlawful for any person to store or use any blasting agents or explosives, or conduct, supervise or control a blasting operation in this state without first complying with the provisions of the Oklahoma Explosives and Blasting Regulation Act and rules promulgated by the Oklahoma Mining Commission.

C. Except as otherwise required by this part, by January 1, 1996:

1. Any person performing blasting activity shall be certified as a blaster by the Department of Mines;

2. All blasting operations shall be conducted under the direction of a certified blaster. Blaster certification may be obtained from the Department upon application and proof of competency as determined by rules of the Department; and

3. Before January 1, 1996, all blasting operations and activities shall be conducted by competent, experienced persons who understand the hazards involved.

D. Any blaster certification issued by the Department shall be carried by the blaster or shall be on file at the blasting area during blasting operations.

E. A blaster and at least one other person shall be present at the firing of a blast.

63-123.2.

A. Except as otherwise provided by this part, it is a violation to manufacture, store, or use explosives or blasting agents without first obtaining a permit from the Department of Mines.

B. Permits issued under this division shall not be transferable, and shall be readily available for inspection by representatives of the Department and law enforcement officials.

C. The Department may place such restrictions and limitations on permits as it deems necessary.

D. The Department may issue one-time or limited-time permits or permits for continuous blasting operations.

E. 1. Permits for continuous blasting operations issued under this division shall be valid for the calendar year after the date of issue unless revoked or suspended. Permits for continuous blasting operations may be renewed on each issuance date and a showing of compliance with the Oklahoma Explosives and Blasting Regulation Act and rules promulgated thereto.

2. Permits for one-time or limited-time permits shall be valid only for the time specified in the permit.

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F. Any person holding a permit issued under this division shall keep such records as may be required by the Department. Records shall be maintained for not less than two (2) years following the year in which the record is made. All such records shall be open to inspection by the Department or its representatives during normal business hours.

63-123.2A.

A. No person shall purchase blasting agents or explosives in this state without first obtaining a permit pursuant to the Oklahoma Explosives and Blasting Regulation Act or without first obtaining written notification from the Department of Mines that the person is exempt from this permit requirement.

B. Distributors or sellers of blasting agents or explosives shall require presentation of either the permit or exemption notification required in subsection A of this section before the sale or transfer of blasting agents or explosives.

C. The Oklahoma Mining Commission shall promulgate rules to implement this section.

63-123.3.

The Department shall enforce the provisions of this division and for such purposes shall:

1. Issue permits to applicants found by the Department, after inspection and investigation, to be qualified for such permit under the provisions of this division and the rules promulgated by the Department;

2. Deny, suspend, or revoke permits upon a finding of noncompliance or violation of the provisions of this division or of the applicable rules of the Department;

3. Hold hearings upon the application of any person aggrieved by any order of the Department with respect to the denial, suspension, or revocation of any permit; and

4. Inspect, during normal business hours, any building, structure, or premises subject to the provisions of this division, and, upon the discovery of any violation of this division or the applicable rules, issue such orders as are necessary for the safety of workers and the public, and, in the case of imminent hazard or emergency, apply for an injunction in the appropriate district court.

63-123.4.

A. The Department of Mines shall promulgate the necessary rules to implement the provisions of this Division. Rules promulgated by the Department shall include but not be limited to requirements for

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blasting plans, use of explosives, public notices, and records.

B. The Department of Mines may establish a schedule of fees to be charged for applications for or issuance of new and renewed certifications and permits required pursuant to this division. The fees shall be subject to the following provisions:

1. The Department shall follow the procedures required by the Administrative Procedures Act for promulgating rules in establishing or amending any such schedule of fees;

2. The Department shall base its schedule of fees upon the reasonable costs of operating the programs specified by this division; and

3. The fees authorized by this section shall not be implemented by emergency rule but shall be adopted by permanent rules, which shall be submitted to the Legislature for review pursuant to Section 308 of Title 75 of the Oklahoma Statutes prior to implementation.

63-123.5.

A. In the enforcement of the Oklahoma Explosives and Blasting Regulation Act pursuant to this division, any person who violates any permit condition or who violates any other provision of the Oklahoma Explosives and Blasting Regulation Act or rules promulgated thereto pursuant to this division may be assessed an administrative penalty by the Department. Such penalty shall not exceed Five Thousand Dollars (\$5,000.00) for each violation. Each day of continuing violation may be deemed a separate violation for purposes of penalty assessments. In determining the amount of the penalty, consideration shall be given to the person's history of previous violations regarding explosives and blasting operation; the seriousness of the violation, including any irreparable harm to the environment and any hazard to the health or safety of the public; whether the person was negligent; and the demonstrated good faith of the person charged in attempting to achieve rapid compliance after notification of the violation.

B. An administrative penalty shall be assessed by the Department only after the person charged with a violation described under subsection A of this section has been given an opportunity for a hearing pursuant to Article II of the Administrative Procedures Act. Where such a hearing has been held, the Department shall make findings of fact, and shall issue a written decision as to the occurrence of the violation and the amount of the penalty which is warranted, incorporating, when appropriate, an order therein requiring that the penalty be paid. When appropriate, the Department shall consolidate such hearings with other proceedings under the Oklahoma Explosives and Blasting Regulation Act. Any hearing under this section shall be of record. Where the person charged with such a violation fails to avail himself of the opportunity for a hearing, an administrative penalty shall be assessed by the Department after determining that a violation did occur, and the amount of the penalty which is warranted, and issuing an order requiring that the penalty be paid.

C. Upon the issuance of a notice or order charging that a violation of the Oklahoma Explosives and Blasting Regulation Act has occurred, the Department shall inform the operator within thirty (30) days of the proposed amount of said penalty. The person charged with

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the penalty shall then have thirty (30) days to pay the proposed penalty in full or, if the person wishes to contest either the amount of the penalty or the fact of the violation, forward the proposed amount to the Department for placement in an escrow account. If through administrative or judicial review of the proposed penalty, it is determined that no violation occurred, or that the amount of the penalty should be reduced, the Department shall within thirty (30) days remit the appropriate amount to the person.

D. Administrative penalties owed under the Oklahoma Explosives and Blasting Regulation Act may be recovered in a civil action brought by the Attorney General or any district attorney in the district in which the violation occurred at the request of the Department in the appropriate district court. Such action, also, may be brought by the Department.

E. Any person who willfully and knowingly violates a condition of a permit issued pursuant to this division or fails or refuses to comply with any order issued under this division, or any order incorporated in a final decision issued by the Department under this division, shall, upon conviction, be punished by a fine of not more than Ten Thousand Dollars (\$10,000.00) or by imprisonment for not more than one (1) year, or both.

F. Whenever a corporate permittee violates a condition of a permit issued pursuant to this division or fails or refuses to comply with any order issued under this division, or any order incorporated in a final decision issued by the Executive Director of the Department of Mines under this division, any director, officer or agent of such corporation who willfully and knowingly authorized, ordered or carried out such violation, failure or refusal shall be subject to the same administrative penalties, fines and imprisonment that may be imposed upon a person under subsections A and E of this section.

G. Whoever knowingly makes any false statement, representation or certification, or knowingly fails to make any statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to this division or any order of decision issued by the Department under this division, shall, upon conviction, be punished by a fine of not more than Ten Thousand Dollars (\$10,000.00) or by imprisonment for not more than one (1) year, or both.

H. Any person who fails to correct a violation for which a citation has been issued within the period permitted for its correction shall be assessed an administrative penalty of not less than Seven Hundred Fifty Dollars (\$750.00) for each day during which such failure or violation continues.

The period permitted for corrections of violations shall not end until:

1. The entry of a final order by the Department after an expedited hearing which ordered the suspension of the abatement requirements of the citation because it was determined that the person will suffer irreparable loss or damage from the application of the abatement requirements; or

2. The entry of an order by a court in any review proceedings initiated by the person in which the court orders the suspension of the abatement requirements.

I. Any person who shall, except as permitted by law, willfully resist, prevent, impede or interfere with the Department or any of the agents or employees thereof in the performance of duties pursuant

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to this division shall, upon conviction, be punished by a fine of not more than Five Thousand Dollars (\$5,000.00), or by imprisonment for not more than one (1) year, or both.

63-123.6.

The provisions of this part shall be in addition to any other state or federal laws or municipal ordinances regulating explosives, blasting agents or similar devices. Each person shall comply with all applicable state and federal laws and regulations and municipal ordinances for the storage, manufacture, transportation and the use of explosives or blasting agents.

63-123.7.

Any fees, administrative penalties or any other monies obtained by the Department of Mines pursuant to the Oklahoma Explosives and Blasting Regulation Act shall be deposited in the Department of Mines Revolving Fund and shall be expended by the Department of Mines for implementation and enforcement of this part or as otherwise deemed necessary by the Department for complying with its responsibilities and duties according to law.

63-123.8.

- A. 1. The provisions of this part shall not apply to:
 - a. persons engaged in shooting wells or seismographic operations for the purpose of oil or gas production,
 - b. mining operations regulated by Title 45 of the Oklahoma Statutes, and
 - c. persons using explosives or blasting agents for noncommercial use on their own land, owned in fee or by contract, for the removal of trees, rocks and dams or for other normal agricultural purposes.

2. Any person exempted from the provisions of the Oklahoma Explosives and Blasting Regulation Act pursuant to this subsection shall be liable for all damages caused by the use of explosives, or blasting agents and blasting operations, which damages shall be recoverable in any court of competent jurisdiction.

- B. In addition, the provisions of this part shall not apply to:

1. Any municipalities or counties in this state using any blasting agents, explosives or conducting, supervising or controlling a blasting operation in this state. Any such municipality or county shall comply with rules promulgated by the Oklahoma Mining Commission;

2. The Department of Transportation in the conducting, supervision or controlling of any blasting operation in this state,

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provided the Department shall comply with rules promulgated by the Oklahoma Mining Commission;

3. Duly qualified bomb technicians of municipal, county, state, and federal law enforcement agencies for the transportation, storage or disposal of any explosive chemical, compound or device, when such technician is performing responsibilities for the preservation of public peace, safety, or criminal investigation.

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Attachment 2
Oklahoma Underground Facilities Damage Prevention Act

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§63-142.1. Short title.

This act shall be known and may be cited as the "Oklahoma Underground Facilities Damage Prevention Act".

Laws 1981, c. 94, § 1, eff. Jan. 1, 1982.

§63-142.2. Definitions.

As used in the Oklahoma Underground Facilities Damage Prevention Act:

- 1) "Certified project" means a project where the public agency responsible for the public project, as part of its procedure, certifies that the project right-of-way is free and clear of underground facilities or wherein the public agency responsible for such project, as part of its procedure, notifies all persons determined by the public agency to have underground facilities located within the construction right-of-way and certifies that all known underground facilities are duly located or noted on the engineering drawings for the project;
- 2) "Damage" means any impact upon or removal of support from an underground facility as a result of explosion, excavation or demolition which according to the operating practices of the operator of the underground facilities would necessitate the repair thereof;
- 3) "Demolish" means to wreck, raze, render, move or remove a structure by means of any equipment or explosive;
- 4) "Demolition" means the act or operation of demolishing a structure;
- 5) "Excavate" means to dig, compress or remove earth, rock or other materials in or on the ground by use of mechanized equipment or blasting, including, but not necessarily limited to, augering, boring, backfilling, drilling, grading, pile driving, plowing in, pulling in, trenching, tunneling and plowing; provided, however, that neither:
 - a) the moving of earth by tools manipulated only by human or animal power, nor
 - b) any form of cultivation for agricultural purposes, nor any augering, dozing by noncommercial dozer operators or digging for postholes, farm ponds, land clearing or other normal agricultural purposes, nor
 - c) routine maintenance, nor
 - d) work by a public agency or its contractors on a preengineered project, nor
 - e) work on a certified project, nor
 - f) work on a permitted project, nor
 - g) the opening of a grave in a cemetery, nor
 - h) a solid waste disposal site which is a preengineered project, nor
 - i) any individual excavating on his own property and who is not in the excavating business for hire, shall be deemed excavation
- 6) "Excavation" means the act or operation of excavating;
- 7) "Excavator" means a person or public agency that intends to excavate or demolish within the State of Oklahoma;
- 8) "Notification center" means the statewide center currently known as the Oklahoma One-Call System, Inc., which has as one of its purposes to receive notification of

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- planned excavation and demolition in a specified area from excavators, and to disseminate such notification of planned excavation or demolition to operators who are members and participants;
- 9) "Operator" shall mean and include any person or public agency owning or operating underground facilities;
- 10) "Permitted project" means a project where a permit for the work to be performed must be issued by a state or federal agency and, as a prerequisite to receiving such permit, the applicant must locate all underground facilities in the area of the work and in the vicinity of any blasting and notify each owner of such underground facilities;
- 11) "Person" includes any individual, partnership, corporation, association, cooperative, trust or other entity, including a person engaged as a contractor by a public agency, but not including a public agency;
- 12) "Preengineered project" means a public project wherein the public agency responsible for such project, as part of its engineering and contract procedures, holds a meeting prior to the commencement of any construction work on such project in which all persons, determined by the public agency to have underground facilities located within the construction area of the project, are invited to attend and given an opportunity to verify or inform the public agency of the location of their underground facilities, if any, within the construction area and where the location of all known underground facilities are duly located or noted on the engineering drawing and specifications for the project;
- 13) "Public agency" means the state or any board, commission or agency of the state, and any city, town, county, subdivision thereof or other governmental entity;
- 14) "Routine maintenance" means the grading of roads and barrow or drainage ditches, the removal and replacement of pavement, including excavation relating thereto and the installation and maintenance of drainage and bridge facilities, signs, guardrails, and electrical and communications facilities in or on the public rights-of-way by a public agency; and
- 15) "Underground facility" means any underground line, cable, facility, system and appurtenances thereto, for producing, storing, conveying, transmitting or distributing communication (including voice, video, or data information), electricity, power, light, heat, refined petroleum products, water (including storm water), steam, sewage and other commodities. Underground facilities shall also mean oil and natural gas pipelines that are subject to the Hazardous Liquid Transportation System Safety Act and natural gas pipelines subject to the jurisdiction of the Oklahoma Corporation Commission Pipeline Safety Department, and any oil and gas pipeline located in a public right-of-way.

Added by Laws 1981, c. 94, § 2, eff. Jan. 1, 1982. Amended by Laws 1995, c. 344, § 27, eff. Nov. 1, 1995; Laws 2002, c. 412, § 1, eff. July 1, 2002; Laws 2003, c. 362, § 1, eff. Nov. 1, 2003; Laws 2004, c. 427, § 1, emerg. eff. June 4, 2004.

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§63-142.3. Filing of notice - Participation by municipality in statewide one-call notification center.

All operators of underground facilities shall participate in the statewide one-call notification center and shall have on file with the notification center a notice that such operator has underground facilities, the county or counties where such facilities are located, and the address and telephone number of the person or persons from whom information about such underground facilities may be obtained. A municipality shall participate in the statewide one-call notification center as provided for in this section.

25, § 1, emerg. eff. March 30, 1992; Laws 2003, c. 362, § 2, eff. Nov. 1, 2003, Amended by Laws 2016, HB 1951, c. 151, § 1, eff. November 1, 2016

§63-142.4. Filing fees.

- A. As provided for in this section, the notification center shall charge and collect fees from operators filing notices pursuant to Section 142.3 of this title, except for rural water districts which have less than one thousand one hundred meters and municipalities which have a population of less than three thousand (3,000).
- B. Upon the initial filing of a notice or statement and annually thereafter, a fee shall be collected in a manner as provided for in Section 142.10 of this title. The fee shall be due and payable on January 1 of each year. Failure to pay such fee on or before February 1 of such year shall result in the filing being void and the notification center shall remove such operator from the list of operators having underground facilities in the county. Such operator may thereafter file again pursuant to this act, but only upon payment to the notification center of the above-specified initial filing fee and an additional late filing fee of Fifty Dollars (\$50.00).
- C. The notification center shall maintain a current list of all operators on file pursuant to this act and shall make copies of such list available upon payment of the appropriate fees.

Added by Laws 1981, c. 94, § 4, eff. Jan. 1, 1982. Amended by Laws 2003, c. 362, § 3, eff. Nov. 1, 2003..

§63-142.5. Certain excavations, demolitions and explosions prohibited near certain facilities.

No excavator shall demolish a structure, discharge an explosive or commence to excavate in a highway, street, alley or other public ground or way, a private easement, or on or near the location of the facilities of an operator without first complying with the requirements of the Underground Facilities Damage Prevention Act and the Oklahoma Explosives and Blasting Regulation Act.

Added by Laws 1981, c. 94, § 5, eff. Jan. 1, 1982. Amended by Laws 1995, c. 344, § 28, eff. Nov. 1, 1995.

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§63-142.6. Notice of proposed demolition, explosion or excavation - Marking or providing location of facilities - Emergencies.

- A. Before an excavator shall demolish a structure, discharge any explosive or commence to excavate in a highway, street, alley or other public ground or way, on or near the location of an operator's underground facilities, or a private easement, such excavator shall first notify all operators in the geographic area defined by the notification center who have on file with the notification center a notice pursuant to Section 142.3 of this title to determine whether any operators have underground facilities in or near the proposed area of excavation or demolition. When an excavator has knowledge that an operator does not have underground facilities within the area of the proposed excavation, the excavator need not notify the operator of the proposed excavation. However, an excavator shall be responsible for damage to the underground facilities of an operator if the notification center was not notified. Notice shall be given no more than ten (10) days nor less than forty-eight (48) hours, excluding Saturdays, Sundays and legal holidays, prior to the commencement of the excavation or demolition.
- B. Each operator served with notice in accordance with subsection A above either directly or by notice to the notification center shall, within forty-eight (48) hours after receipt of verification from the notification center that the notice has been accepted and acknowledged, excluding Saturdays, Sundays and legal holidays, unless otherwise agreed to between the excavator and operator, locate and mark or otherwise provide the approximate location of the underground facilities of the operator in a manner as to enable the excavator to employ hand-dug test holes to determine the precise location of the underground facilities in advance of excavation. For the purpose of this act, the approximate location of the underground facilities shall be defined as a strip of land two (2) feet on either side of such underground facilities. Whenever an operator is served with notice of an excavation or demolition and determines that the operator does not have underground facilities located within the proposed area of excavation or demolition, the operator shall communicate this information to the excavator originating the notice prior to the commencement of such excavation or demolition.
- C. The only exception to subsection A of this section shall be when an emergency exists that endangers life, health or property. Under these conditions, excavation operations may begin immediately, providing reasonable precautions are taken to protect underground facilities. All operators of underground facilities within the area of the emergency must be notified promptly when an emergency requires excavation prior to the location of the underground facilities being marked
- D. Every notice given by an excavator to an operator pursuant to this section or to the notification center pursuant to Section 142.3 of this title shall contain at least the following information:
 - 1. The name of the individual serving such notice;
 - 2. The location of the proposed area of excavation or demolition;

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3. The name, address and telephone number of the excavator or excavator's company;
 4. The excavator's field telephone number, if one is available;
 5. The type and the extent of the proposed work;
 6. Whether or not the discharging of explosives is anticipated; and
 7. The date and time when work is to begin.
- E. In marking the approximate location of underground facilities, an operator shall follow the standard color coding described herein:

Operator and Type of Product	Specific Group Identifying Color
Electric Power Distribution and Transmission	Safety Red
Municipal Electric Systems	Safety Red
Gas Distribution and Transmission	High Visibility Safety Yellow
Oil Distribution and Transmission	High Visibility Safety Yellow
Dangerous Materials, Product Lines, Steam Lines	High Visibility Safety Yellow
Telephone and Telegraph Systems	Safety Alert Orange
Police and Fire Communications	Safety Alert Orange
Cable Television	Safety Alert Orange
Water Systems	Safety Precaution Blue
Slurry Systems	Safety Precaution Blue
Sewer Systems	Safety Green

Added by Laws 1981, c. 94, § 6, eff. Jan. 1, 1982. Amended by Laws 2003, c. 362, § 4, eff. Nov. 1, 2003, Amended by Laws 2016, HB 1951, c. 151, § 2, eff. November 1, 2016

§63-142.7. Use of powered or mechanized equipment - Exemptions.

- A. Except as provided in subsection B of this section, powered or mechanized equipment shall not be used directly over marked routes of underground facilities until the precise location of the underground facilities has been determined by the excavator, and then only after the facilities have been exposed and properly protected to avoid damage to them. If the precise location of the underground facilities cannot be determined by the excavator, the operator thereof shall be notified by the excavator so that the operator can determine the precise location of the underground facilities prior to continuing excavation or demolition.
- B. The only exception to the prohibition of the use of powered or mechanized equipment directly over marked routes of underground facilities shall be for the removal of pavement or masonry, and then only to the depth of such pavement or masonry.

Laws 1981, c. 94, § 7, eff. Jan. 1, 1982.

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§63-142.8. Additional notice required.

In addition to the notice required by Section 142.6 of this title, whenever the demolition of a structure is proposed, operators in the geographic area defined by the notification center who have a notice on file with the notification center pursuant to Section 142.3 of this title shall be given at least seven (7) business days' notice of the proposed demolition before the demolition work begins. Such notice shall be initiated by the notification center after the excavator has met local code requirements for a demolition permit. When an operator is served with notice and determines that underground facilities are within the proposed area of demolition and such facilities require additional protection, service removal or termination, the operator shall communicate this information to the excavator and by mutual agreement the operator and excavator shall determine a date to begin the demolition which shall not exceed sixty (60) business days from the original demolition notice. If a public agency determines that the structure endangers the public health or safety, then the public agency may, in the manner provided by law, order the immediate demolition of the structure.

Added by Laws 1981, c. 94, § 8, eff. Jan. 1, 1982. Amended by Laws 2003, c. 362, § 5, eff. Nov. 1, 2003; Laws 2004, c. 427, § 2, emerg. eff. June 4, 2004.

§63-142.9. Damage to underground facilities.

- A. When any damage occurs to an underground facility or its protective covering, the operator thereof shall be notified immediately by the excavator who caused the damage.
- B. Upon receiving notice of such damage, the operator shall promptly dispatch personnel to the location to effect temporary or permanent repairs.
- C. Should damage occur that endangers life, health or property, the excavator responsible for the work shall keep all sources of ignition away from the damaged area and shall take immediate action to protect the public and property and to minimize the hazard until arrival of the operator's personnel or until the appropriate police or fire officials shall have arrived and taken charge of the damaged area.
- D. An excavator shall delay any backfilling in the immediate area of the damaged underground facilities until the damage has been repaired, unless the operator authorizes otherwise. The repair of such damage must be performed by the operator or by qualified personnel authorized by the operator.

Laws 1981, c. 94, § 9, eff. Jan. 1, 1982.

§63-142.9a. Damage to underground facilities – Liability - Injunction.

- A. Any excavator, except for a public agency who fails to comply with the Oklahoma Underground Facilities Damage Prevention Act and who damages an underground facility owned or operated by a nonprofit rural water corporation organized pursuant to Section 863 of Title 18 of the Oklahoma Statutes or a rural water district organized pursuant to the Rural Water, Sewer, Gas, and Solid Waste

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Management Districts Act, shall be liable for the underground damage to and responsible for the repair of such facilities. Any new underground facilities installed on and after September 1, 1992, shall contain materials capable of being detected so that the facilities can be accurately located.

- B. Any excavator who damages or cuts an underground facility, as a result of negligently failing to comply with the provisions of the Oklahoma Underground Facilities Damage Prevention Act or as a result of failing to take measures for the protection of an underground facility shall be liable to the operator of the underground facility for the repair of the damaged underground facility.
- C. Except for public agencies, any excavator who by willful act or by reckless disregard of the rights of others, repeatedly violates the provisions of the Oklahoma Underground Facilities Damage Prevention Act and repeatedly damages underground facilities, thereby threatening the public health, safety, and welfare, may be enjoined by a court of competent jurisdiction from further excavation.

Added by Laws 1992, c. 369, § 1, eff. Sept. 1, 1992. Amended by Laws 2002, c. 412, § 2, eff. July 1, 2002; Laws 2003, c. 362, § 6, eff. Nov. 1, 2003.

§63-142.10. Statewide notification center.

- A. This act recognizes the value of and authorizes the establishment of a statewide notification center.
- B. Upon establishment, the notification center shall operate twenty-four (24) hours a day, seven (7) days a week. Notification, as required by Section 142.6 of this title, to operators who are members of or participants in the notification center, shall be given by notifying the notification center by telephone or other acceptable means of communication, the content of such notification to conform to Section 142.6 of this title.
- C. All operators who have underground facilities within the defined geographical boundary of the notification center shall be afforded the opportunity to become a member of the notification center on the same terms as the original members. Others may participate as nonmembers on terms and conditions as the members deem appropriate.
- D. A suitable record shall be maintained by the notification center to document the receipt of the notices from excavators as required by this act.

Added by Laws 1981, c. 94, § 10, eff. Jan. 1, 1982. Amended by Laws 2003, c. 362, § 7, eff. Nov. 1, 2003.

§63-142.11. Exemptions.

Notwithstanding anything which may be contained in this act to the contrary, public agencies and their contractors engaged in work within the public right-of-way which work is a preengineered project, certified project or routine maintenance shall be exempt from the provisions of this act. Provided, a public agency contractor, prior to

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engaging in routine maintenance, shall take reasonable steps to determine the location of underground facilities in or near the proposed area of work. Reasonable steps may include utilization of the statewide one-call notification center procedures as provided for in Section 142.6 of this title.

Added by Laws 1981, c. 94, § 11, eff. Jan. 1, 1982. Amended by Laws 1986, c. 114, § 1, eff. Nov. 1, 1986; Laws 2003, c. 362, § 8, eff. Nov. 1, 2003.

§63-142.12. Election not to participate in statewide one-call notification center – Designation of person authorized to provide information.

Added by Laws 2003, c. 362, § 9, eff. Nov. 1, 2003. Repealed by Laws 2016, HB 1951, c. 151, § 3, eff. November 1, 2016

§63-142.13. Enforcement authority – Corporation Commission.

The Corporation Commission is hereby designated as the agency to enforce the provisions of the Oklahoma Underground Facilities Damage Prevention Act, Section 142.1 et seq. of Title 63 of the Oklahoma Statutes, over excavation or demolition on or near or directly over the location of, and notice of damage to, oil and natural gas physical facilities which are described by the currently effective definition of "pipeline" in 49 CFR Part 192.3 and "pipeline" and "pipeline system" in 49 CFR Part 195.2. Enforcement authority granted in this section shall be concurrent with and shall not be construed to modify or limit any private right of action, including those available pursuant to Section 142.9a of Title 63 of the Oklahoma Statutes. Terms used in this section shall be as defined in the Oklahoma Underground Facilities Damage Prevention Act.

Added by Laws 2014, c. 243, § 1, emerg. eff. May 9, 2014.

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APPENDIX J

**WATERBODIES CROSSED BY THE MIDCONTINENT SUPPLY HEADER
INTERSTATE PIPELINE PROJECT PIPELINE FACILITIES**

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Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities						
Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b, c}
MAINLINE						
Tributary to North Canadian River	S-CN-WCR-17/01/18-01	6.7	Ephemeral	4.6	Open cut	A, E, G
North Canadian River	S-CN-WCR-16/12/08-01	7.7	Perennial	0.0	HDD	A, C, E, G
Tributary to Six Mile Creek	S-CN-WCR-16/12/07-01	9.5	Ephemeral	3.6	Open cut	A, E, G
Sixmile Creek	S-CN-WCR-17/01/18-02	12.2	Intermittent	10.1	Open cut	A, E, G
Tributary to Sixmile Creek	S-CN-WCR-16/12/07-02	12.9	Intermittent	1.0	Open cut	A, E, G
Tributary to Sixmile Creek	S-CN-WCR-16/12/07-03	13.3	Intermittent	2.0	Open cut	A, E, G
Tributary to North Canadian River	S-CN-LAG-17/01/18-01	15.4	Intermittent	7.4	Open cut	A, E, G
Tributary to North Canadian River	S-CN-LAG-17/01/18-02	15.6	Intermittent	0.0	HDD	A, E, G
Tributary to North Canadian River	S-CN-WCR-16/12/07-04	16.0	Ephemeral	5.6	Open cut	A, E, G
Tributary to North Canadian River	S-CN-WCR-16/12/08-99	16.9	Ephemeral	2.4	Open cut	A, E, G
Tributary to North Canadian River	S-CN-RKT-17/04/13-04a	17.4	Intermittent	21.1	Open cut	A, E, G
Tributary to Canadian River	S-CN-TAS-17/01/19-02	18.2	Intermittent	8.7	Open cut	A, E, G
Tributary to Canadian River	S-CN-AAL-17/01/18-03	19.3	Ephemeral	3.0	Open cut	A, E, G
Tributary to Canadian River	S-CN-AAL-17/01/18-01	19.9	Intermittent	5.2	Open cut	A, E, G
Tributary to Canadian River	S-CN-TAS-17/01/19-01	21.3	Ephemeral	4.3	Open cut	A, E, G
Tributary to Canadian River	S-CN-WCR-16/12/08-02	23.1	Ephemeral	3.7	Open cut	A, E, G
Tributary to Canadian River	S-CN-TAS-17/01/18-04	24.6	Intermittent	5.1	Open cut	A, E, G
Tributary to Canadian River	S-CN-WCR-16/12/09-01	25.5	Intermittent	15.2	Open cut	A, E, G
Canadian River	S-GR-RKT-16/12/09-03	28.4	Perennial	0.0	HDD	A, E, G, H
Tributary to Canadian River	S-GR-TAS-17/01/19-02	28.8	Ephemeral	3.0	Open cut	A, E, G
Tributary to Canadian River	S-GR-RKT-16/12/10-01	30.0	Ephemeral	3.0	Open cut	A, E, G

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APPENDIX J (cont'd)
Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities

Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b, c}	Fishery Type ^d
Tributary to Canadian River	S-GR-RKT-16/12/10-03	30.8	Perennial	12.1	Dry open cut	A, E, G	Warm water
Tributary to Canadian River	S-GR-RKT-16/12/10-02	31.1	Ephemeral	3.5	Open cut	A, E, G	Warm water
Tributary to Canadian River	S-GR-EHK-17/01/18-02	32.1	Ephemeral	8.8	Open cut	A, E, G	Warm water
Tributary to Buggy Creek	S-GR-WCR-16/12/10-06	34.6	Ephemeral	2.0	Open cut	A, E, G	Warm water
Buggy Creek	S-GR-RFT-16/12/10-01	34.8	Perennial	17.5	Dry open cut	A, E, G, H	Warm water
Tributary to Buggy Creek	S-GR-WCR-16/12/10-05	35.4	Intermittent	3.3	Open cut	A, E, G	Warm water
Tributary to Salt Creek	S-GR-WCR-16/12/09-03b	39.4	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Salt Creek	S-GR-WCR-16/12/09-03	39.4	Ephemeral	4.0	Open cut	A, E, G	Warm water
Salt Creek	S-GR-RKT-17/01/18-08	41.1	Perennial	15.1	Dry open cut	A, E, G	Warm water
Tributary to Salt Creek	S-GR-RFT-16/12/09-01	42.2	Perennial	16.1	Dry open cut	A, E, G	Warm water
Tributary to Salt Creek	S-GR-WCR-16/12/09-05	43.7	Ephemeral	2.0	Open cut	A, E, G	Warm water
Tributary to West Bitter Creek	S-GR-WCR-16/12/10-07	45.7	Ephemeral	6.6	Open cut	A, E, G	Warm water
Tributary to West Bitter Creek	S-GR-RFT-16/12/10-06	46.4	Ephemeral	1.2	Open cut	A, E, G	Warm water
West Bitter Creek	S-GR-WCR-16/12/09-01	48.8	Perennial	10.1	Dry open cut	A, C, E, G	Warm water
Brushy Creek	S-GR-RFT-16/12/12-01	50.4	Perennial	17.0	Dry open cut	A, E, G	Warm water
Tributary to Brushy Creek	S-GR-RKT-17/07/11-10	50.9	Ephemeral	6.2	Open cut	A, E, G	Warm water
Unnamed Pond	S-GR-RFT-16/12/12-02	50.9	Pond	NA	NA	A, E, G	Warm water
Tributary to Brushy Creek	S-GR-RFT-16/12/12-03	51.1	Ephemeral	2.9	Open cut	A, E, G	Warm water
Tributary to East Bitter Creek	S-GR-RKT-17/01/18-11	51.9	Ephemeral	3.8	Open cut	A, E, G	Warm water
East Bitter Creek	S-GR-EHK-17/01/18-09	52.7	Perennial	8.2	Open cut	A, C, E, G	Warm water
Unknown Tributary	S-GR-RKT-17/01/18-15	53.3	Ephemeral	3.0	Open cut	A, E, G	Warm water
Tributary to Spring Creek	S-GR-RKT-16/12/10-09	53.8	Ephemeral	NA	NA	A, E, G	Warm water

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APPENDIX J (cont'd)							
Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities							
Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b, c}	Fishery Type ^d
Spring Creek	S-GR-RKT-16/12/10-10	54.5	Perennial	9.0	Open cut	A, E, G	Warm water
Tributary to West Winter Creek	S-GR-RFT-17/02/08-07	56.8	Perennial	3.8	Open cut	A, E, G	Warm water
Tributary to West Winter Creek	S-GR-RFT-17/02/08-11	57.1	Intermittent	2.0	Open cut	A, E, G	Warm water
Tributary to West Winter Creek	S-GR-RKT-16/12/12-12	57.6	Ephemeral	1.0	Open cut	A, E, G	Warm water
Tributary to West Winter Creek	S-GR-RKT-16/12/12-11	57.6	Ephemeral	2.0	Open cut	A, E, G	Warm water
Tributary to West Winter Creek	S-GR-RKT-16/12/12-09	58.1	Ephemeral	4.5	Open cut	A, E, G	Warm water
Tributary to West Winter Creek	S-GR-RKT-16/12/12-10	58.2	Intermittent	3.4	Open cut	A, E, G	Warm water
Tributary to West Winter Creek	S-GR-RKT-16/12/12-07	58.3	Ephemeral	2.1	Open cut	A, E, G	Warm water
Tributary to Winter Creek	S-GR-RKT-16/12/12-04	59.0	Intermittent	3.2	Open cut	A, E, G	Warm water
Winter Creek	S-GR-RKT-16/12/12-02	59.7	Perennial	8.9	Dry open cut	A, C, E, G	Warm water
Tributary to Winter Creek	S-GR-RKT-16/12/12-13	60.8	Intermittent	5.3	Open cut	A, E, G	Warm water
Tributary to Winter Creek	S-GR-RKT-16/12/13-04	61.0	Ephemeral	1.0	Open cut	A, E, G	Warm water
Tributary to Winter Creek	S-GR-RKT-16/12/13-02	61.1	Intermittent	4.0	Open cut	A, E, G	Warm water
Tributary to Winter Creek	S-GR-RKT-16/12/13-01a	61.1	Ephemeral	2.2	Open cut	A, E, G	Warm water
Tributary to Winter Creek	S-GR-RKT-16/12/13-01b	61.1	Ephemeral	2.0	Open cut	A, E, G	Warm water
Unnamed Tributary	S-GR-RKT-16/12/13-14	61.9	Ephemeral	7.0	Open cut	A, E, G	Warm water
Tributary to Laffin Creek	S-GR-TAS-17/01/19-01b	63.4	Ephemeral	4.4	Open cut	A, E, G	Warm water
Tributary to Laffin Creek	S-GR-TAS-17/01/19-01a	63.4	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Washita River	S-GR-RKT-16/12/13-16	63.8	Ephemeral	2.0	Open cut	A, E, G	Warm water
Washita River	S-GR-RKT-16/12/13-19	65.0	Perennial	0.0	HDD	A, C, E, G	Warm water
Roaring Creek	S-GR-EHK-17/01/19-07	66.9	Perennial	21.1	Dry open cut	A, C, E, G	Warm water
Tributary to Slough Creek	S-GR-WCR-16/12/14-02	68.7	Intermittent	5.6	Open cut	A, E, G	Warm water

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Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities

Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{a, c}	Fishery Type ^d
Slough Creek	S-GR-WCR-16/12/14-01	69.3	Perennial	3.0	Open cut	A, E, G	Warm water
Tributary to Sandy Creek	S-GR-RFT-16/12/13-04	71.0	Ephemeral	2.0	Open cut	A, E, G	Warm water
Sandy Creek	S-GR-EHK-17/01/19-08	71.9	Perennial	9.6	Open cut	A, E, G	Warm water
Tributary to Washita River	S-GR-RKT-17/01/19-16	73.3	Ephemeral	2.1	Open cut	A, E, G	Warm water
Tributary to Washita River	S-GR-WCR-16/12/13-03	73.8	Ephemeral	2.4	Open cut	A, E, G	Warm water
Tributary to Washita River	S-GR-AAL-17/01/19-07a	74.0	Ephemeral	2.0	Open cut	A, E, G	Warm water
Tributary to Washita River	S-GR-AAL-17/01/19-07b	74.0	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Larimore Creek	S-GR-WCR-16/12/14-03	74.8	Intermittent	10.2	Open cut	A, E, G	Warm water
Tributary to Larimore Creek	S-GR-RFT-16/12/12-09	75.2	Ephemeral	2.1	Open cut	A, E, G	Warm water
Larimore Creek	S-GR-RFT-16/12/12-08	75.4	Perennial	2.0	Open cut	A, E, G	Warm water
Tributary to Larimore Creek	S-GR-RKT-16/12/14-08	76.1	Ephemeral	3.0	Open cut	A, E, G	Warm water
Tributary to Larimore Creek	S-GR-TAS-17/07/11-12	76.4	Ephemeral	6.5	Open cut	A, E, G	Warm water
Tributary to Larimore Creek	S-GR-RKT-16/12/15-01	76.4	Intermittent	1.0	Open cut	A, E, G	Warm water
Tributary to Rounds Creek	S-GR-RKT-16/12/15-02	77.3	Intermittent	2.3	Open cut	A, E, G	Warm water
Tributary to Rounds Creek	S-GR-WCR-16/12/15-02	77.8	Intermittent	4.1	Open cut	A, E, G	Warm water
Tributary to Rounds Creek	S-GA-RKT-16/12/15-03	78.6	Intermittent	2.9	Open cut	A, E, G	Warm water
Tributary to Rounds Creek	S-GA-WCR-16/12/15-01	79.2	Intermittent	2.3	Open cut	A, E, G	Warm water
Rounds Creek	S-GA-RKT-17/01/20-03	79.8	Perennial	10.5	Dry open cut	A, E, G	Warm water
Tributary to Rush Creek	S-GA-RFT-16/12/15-15	81.2	Ephemeral	2.1	Open cut	A, E, G	Warm water
Tributary to Rush Creek	S-GA-RFT-16/12/16-07	81.6	Ephemeral	2.0	Open cut	A, E, G	Warm water
Tributary to Rush Creek	S-GA-RFT-16/12/16-12	82.1	Ephemeral	1.3	Open cut	A, E, G	Warm water
Rush Creek	S-GA-RFT-16/12/16-10	83.9	Perennial	36.7	Dry open cut	A, E, G	Warm water

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Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities						
Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b, c}
Tributary to Rush Creek	S-GA-RFT-16/12/16-26	84.1	Ephemeral	1.0	Open cut	A, E, G
Tributary to Rush Creek	S-GA-RFT-16/12/20-01a	84.8	Intermittent	2.0	Open cut	A, E, G
Tributary to Rush Creek	S-ST-RKT-17/07/13-02	85.8	Intermittent	43.1	Open cut	A, E, G
Tributary to Wildcat Creek	S-ST-LAG-17/01/19-04c	87.0	Ephemeral	NA	NA	A, E, G
Tributary to Wildcat Creek	S-ST-LAG-17/01/19-04b	87.0	Ephemeral	NA	NA	A, E, G
Unnamed Pond	S-ST-LAG-17/01/19-03	87.0	Pond	NA	NA	A, E, G
Tributary to Wildcat Creek	S-ST-LAG-17/01/19-04a	87.0	Ephemeral	4.0	Open cut	A, E, G
Tributary to Wildcat Creek	S-ST-RFT-16/12/20-17	87.2	Ephemeral	3.4	Open cut	A, E, G
Tributary to Wildcat Creek	S-ST-WCR-17/10/28-02	88.7	Intermittent	NA	NA	A, E, G
Tributary to Wildcat Creek	S-ST-RFT-16/12/21-06b	88.8	Intermittent	24.5	Open cut	A, E, G
Tributary to Wildcat Creek	S-ST-RFT-16/12/21-04	89.2	Ephemeral	1.0	Open cut	A, E, G
Tributary to Wildcat Creek	S-ST-RFT-16/12/21-01	89.7	Ephemeral	2.0	Open cut	A, E, G
Wildcat Creek	S-GA-RFT-16/12/21-02	89.9	Perennial	20.5	Dry open cut	A, E, G
Tributary to Wildcat Creek	S-GA-RFT-16/12/21-08	90.4	Intermittent	2.2	Open cut	A, E, G
Tributary to Wildcat Creek	S-GA-RFT-16/12/21-17	90.9	Ephemeral	2.0	Open cut	A, E, G
Tributary to Wildcat Creek	S-GA-RFT-16/12/21-15	91.2	Ephemeral	4.0	Open cut	A, E, G
Tributary to Salt Creek	S-GA-RFT-16/12/21-12	92.3	Ephemeral	1.6	Open cut	A, E, G
Unnamed Pond	S-GA-TAS-17/10/27-02	92.3	Pond	NA ^e	NA ^e	A, E, G
Tributary to Salt Creek	S-GA-AJF-17/01/05-03	93.1	Ephemeral	NA	NA	A, E, G
Tributary to Salt Creek	S-GA-AJF-17/01/05-06	93.7	Ephemeral	2.8	Open cut	A, E, G
Unnamed Pond	S-GA-TAS-17/10/27-01	94.6	Pond	NA	NA	A, E, G
Tributary to Salt Creek	S-GA-AJF-17/01/05-25	94.9	Ephemeral	3.1	Open cut	A, E, G

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Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities

Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) *	Proposed Crossing Method *	Water Quality Classification & °	Fishery Type *
Tributary to Salt Creek	S-GA-AJF-1701/05-23	95.0	Ephemeral	1.2	Open cut	A, E, G	Warm water
Tributary to Salt Creek	S-GA-AJF-1701/05-22	95.2	Ephemeral	5.1	Open cut	A, E, G	Warm water
Tributary to Salt Creek	S-GA-AJF-1701/05-15	95.3	Perennial	6.6	Dry open cut	A, E, G	Warm water
Tributary to Salt Creek	S-GA-AJF-1701/05-13	95.5	Intermittent	4.0	Dry open cut	A, E, G	Warm water
Tributary to Salt Creek	S-GA-AJF-1701/05-08	95.9	Ephemeral	2.0	Open cut	A, E, G	Warm water
Tributary to Salt Creek	S-GA-AJF-1701/08-04	96.3	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Salt Creek	S-GA-AJF-1701/08-03	96.3	Ephemeral	4.1	Open cut	A, E, G	Warm water
Tributary to Salt Creek	S-GA-AJF-1701/08-06	96.5	Ephemeral	3.5	Open cut	A, E, G	Warm water
Tributary to Salt Creek	S-GA-AJF-1701/08-07	96.6	Ephemeral	3.1	Open cut	A, E, G	Warm water
Tributary to Salt Creek	S-GA-AJF-1701/10-01	97.5	Ephemeral	5.0	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-GA-AJF-1701/10-11	98.6	Ephemeral	2.1	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-GA-AJF-1701/10-10	98.6	Ephemeral	2.4	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-GA-AJF-1701/10-06	98.6	Ephemeral	3.6	Open cut	A, E, G	Warm water
Wildhorse Creek	S-CR-AJF-1701/10-18	100.5	Perennial	0.0	HDD	A, C, E, G	Warm water
Flat Creek	S-CR-RKT-1701/11-08	102.7	Perennial	3.0	Open cut	A, E, G	Warm water
Tributary to Flat Creek	S-CR-RKT-1701/11-06	102.9	Ephemeral	2.1	Open cut	A, E, G	Warm water
Tributary to Flat Creek	S-CR-EHK-1701/11-11	103.6	Ephemeral	2.7	Open cut	A, E, G	Warm water
Tributary to Flat Creek	S-CR-RKT-1701/11-10	104.1	Ephemeral	2.0	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-CR-LAG-1708/28-02	104.9	Ephemeral	3.2	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-CR-EHK-1701/11-23	105.0	Intermittent	4.0	Open cut	A, E, G	Warm water
Tributary to Bear Creek	S-CR-RKT-1701/11-21	106.6	Ephemeral	1.1	Open cut	A, E, G	Warm water
Bear Creek	S-CR-RKT-1701/12-06	106.8	Ephemeral	5.2	Open cut	A, E, G	Warm water

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APPENDIX J (cont'd)							
Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities							
Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b,c}	Fishery Type ^d
Tributary to Bear Creek	S-CR-RKT-17/01/12-02	107.6	Ephemeral	2.2	Open cut	A, E, G	Warm water
Tar Branch	S-CR-AJF-17/01/09-02	108.4	Ephemeral	17.0	Open cut	A, E, G	Warm water
Tributary to Tar Branch	S-CR-EHK-17/01/09-09	109.0	Intermittent	10.0	Open cut	A, E, G	Warm water
Tributary to Tar Branch	S-CR-AJF-17/01/09-10	109.2	Ephemeral	3.4	Open cut	A, E, G	Warm water
Tributary to Tar Branch	S-CR-EHK-17/01/09-11	109.3	Ephemeral	3.3	Open cut	A, E, G	Warm water
Tributary to Tar Branch	S-CR-AJF-17/01/09-11	109.6	Ephemeral	2.7	Open cut	A, E, G	Warm water
Tributary to Tar Branch	S-CR-AJF-17/01/09-09	109.9	Ephemeral	3.1	Open cut	A, E, G	Warm water
Tributary to West Spring Creek	S-CR-AJF-17/01/09-07	110.9	Ephemeral	3.9	Open cut	A, E, G	Warm water
Caddo Creek Site 7 Reservoir	S-CR-RKT-17/06/28-02	110.9	Lake	NA ^e	NA ^e	A, E, G	Warm water
West Spring Creek	S-CR-AJF-17/01/09-04	111.4	Ephemeral	6.1	Open cut	A, E, G	Warm water
Tributary to West Spring Creek	S-CR-AJF-17/01/09-05	111.8	Ephemeral	3.6	Open cut	A, E, G	Warm water
Tributary to West Spring Creek	S-CR-RKT-17/01/16-04	112.1	Ephemeral	2.1	Open cut	A, E, G	Warm water
Tributary to West Spring Creek	S-CR-RKT-17/01/16-01	112.8	Intermittent	13.9	Open cut	A, E, G	Warm water
Tributary to West Spring Creek	S-CR-RKT-17/01/16-05	113.0	Ephemeral	3.5	Open cut	A, E, G	Warm water
Tributary to Spring Creek	S-CR-RKT-17/01/16-06	113.1	Ephemeral	2.2	Open cut	A, E, G	Warm water
Tributary to Spring Creek	S-CR-RKT-17/01/16-07	113.3	Ephemeral	1.3	Open cut	A, E, G	Warm water
Tributary to Spring Creek	S-CR-RKT-17/01/16-99	113.4	Ephemeral	2.1	Open cut	A, E, G	Warm water
Tributary to Spring Creek	S-CR-RKT-17/01/16-09	113.7	Ephemeral	3.0	Open cut	A, E, G	Warm water
Tributary to Spring Creek	S-CR-RKT-17/01/16-08	113.8	Ephemeral	1.0	Open cut	A, E, G	Warm water
Spring Creek	S-CR-RKT-17/01/16-98	114.2	Perennial	33.5	Dry open cut	A, E, G	Warm water
Tributary to Spring Creek	S-CR-RKT-17/01/16-11	114.2	Ephemeral	8.7	Open cut	A, E, G	Warm water
Tributary to Spring Creek	S-CR-RKT-17/01/16-10	114.6	Ephemeral	3.4	Open cut	A, E, G	Warm water

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APPENDIX J (cont'd)

Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities

Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b, c}	Fishery Type ^d
Tributary Hickory Creek	S-CR-RKT-17/08/28-07	115.1	Intermittent	4.2	Open cut	A, E, G	Warm water
Hickory Creek	S-CR-LAG-17/01/16-04	115.8	Perennial	18.6	Dry open cut	A, C, E, G	Warm water
Tributary to Hickory Creek	S-CR-LAG-17/01/16-05	115.8	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Hickory Creek	S-CR-LAG-17/01/16-03	116.1	Intermittent	10.7	Open cut	A, E, G	Warm water
Tributary to Hickory Creek	S-CR-AAL-17/01/16-02	116.4	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Salt Branch	S-CR-AAL-17/01/16-01b	116.8	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Salt Branch	S-CR-AAL-17/01/16-01a	116.8	Ephemeral	1.5	Open cut	A, E, G	Warm water
Tributary to Salt Branch	S-CR-AJF-17/01/16-01	117.1	Ephemeral	3.4	Open cut	A, E, G	Warm water
Tributary to Salt Branch	S-CR-AJF-17/01/16-02	117.3	Ephemeral	3.3	Open cut	A, E, G	Warm water
Tributary to Salt Branch	S-CR-WCR-17/04/13-02	118.1	Intermittent	6.1	Open cut	A, E, G	Warm water
Tributary to Salt Branch	S-CR-RKT-17/01/12-09	118.2	Ephemeral	1.4	Open cut	A, E, G	Warm water
Tributary to Salt Branch	S-CR-RKT-17/01/12-10	118.8	Ephemeral	1.2	Open cut	A, E, G	Warm water
Tributary to Henry House Creek	S-CR-RKT-17/01/28-04	119.5	Ephemeral	2.0	Open cut	A, E, G	Warm water
Tributary to Henry House Creek	S-CR-RKT-17/01/28-05	119.9	Intermittent	5.0	Open cut	A, E, G	Warm water
Henry House Creek	AS-CR-NHD-Line-30	120.2	Intermittent	0.0	HDD	A, E, G	Warm water
Grindstone Creek	S-CR-RKT-17/01/12-13	121.8	Intermittent	12.9	Open cut	A, E, G	Warm water
Tributary to Grindstone Creek	S-CR-RKT-17/01/12-12	122.1	Ephemeral	2.2	Open cut	A, E, G	Warm water
Tributary to Grindstone Creek	S-CR-RKT-17/01/12-17	122.5	Ephemeral	1.0	Open cut	A, E, G	Warm water
Tributary to Philips Creek	S-CR-AJF-17/01/16-06	123.0	Ephemeral	2.4	Open cut	A, E, G	Warm water
Tributary to Philips Creek	S-CR-RKT-17/08/28-09	123.2	Intermittent	15.3	Open cut	A, E, G	Warm water
Tributary to Philips Creek	AS-CR-RKT-17/08/28-08	123.4	Intermittent	NA	NA	A, E, G	Warm water
Tributary to Philips Creek	S-CR-RKT-17/08/28-08	123.4	Intermittent	15.3	Open cut	A, E, G	Warm water

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APPENDIX J (cont'd)							
Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities							
Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b, c}	Fishery Type ^d
Philips Creek	S-CR-AAL-17/01/24-05	124.3	Perennial	10.4	Dry open cut	A, E, G	Warm water
Tributary to Philips Creek	S-CR-WCR-17/04/13-04	124.4	Ephemeral	1.0	Open cut	A, E, G	Warm water
Tributary to Philips Creek	S-CR-LAG-17/01/05-99	124.6	Intermittent	4.6	Open cut	A, E, G	Warm water
Tributary to Philips Creek	S-CR-WCR-17/04/14-02	124.6	Intermittent	NA	NA	A, E, G	Warm water
Tributary to Philips Creek	S-CR-LAG-17/08/29-01	124.8	Intermittent	5.2	Open cut	A, E, G	Warm water
Tributary to Philips Creek	S-CR-LAG-17/01/05-02	124.8	Ephemeral	2.8	Open cut	A, E, G	Warm water
Tributary to Philips Creek	S-CR-LAG-17/01/05-02b	124.8	Ephemeral	2.3	Open cut	A, E, G	Warm water
Tributary to Caddo Creek	S-CR-LAG-17/01/05-03	125.6	Intermittent	3.0	Open cut	A, E, G	Warm water
Tributary to Buzzard Creek	S-CR-WCR-17/04/14-03	126.2	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Buzzard Creek	S-CR-LAG-17/01/08-03	126.7	Intermittent	16.2	Open cut	A, E, G	Warm water
Buzzard Creek	S-CR-LAG-17/01/08-02	126.7	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Buzzard Creek	S-CR-LAG-17/01/08-04	127.0	Intermittent	2.8	Open cut	A, E, G	Warm water
Tributary to Bullhead Creek	S-CR-LAG-17/01/08-06c	127.8	Intermittent	2.1	Open cut	A, E, G	Warm water
Bullhead Creek	S-CR-LAG-17/01/08-06a	127.8	Intermittent	10.9	Open cut	A, E, G	Warm water
Tributary to Bullhead Creek	S-CR-LAG-17/01/08-06b	127.9	Intermittent	NA	NA	A, E, G	Warm water
Deadman Branch	S-CR-AAL-17/01/09-04a	128.8	Intermittent	34.4	Open cut	A, E, G	Warm water
Deadman Branch	S-CR-AAL-17/01/09-04b	128.8	Intermittent	5.1	Open cut	A, E, G	Warm water
Tributary to Deadman Branch	S-CR-AAL-17/01/09-03a	129.1	Intermittent	12.0	Open cut	A, E, G	Warm water
Tributary to Deadman Branch	S-CR-AAL-17/01/09-03b	129.1	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Deadman Branch	S-CR-AAL-17/01/09-01b	129.3	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Deadman Branch	S-CR-AAL-17/01/09-01a	129.3	Intermittent	3.2	Open cut	A, E, G	Warm water
Tributary to Deadman Branch	S-CR-LAG-17/01/09-01	129.5	Intermittent	3.3	Open cut	A, E, G	Warm water

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Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities

Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{a, c}	Fishery Type ^d
Tributary to Deadman Branch	S-CR-LAG-17/01/09-02	129.7	Ephemeral	1.8	Open cut	A, E, G	Warm water
Tributary to Deadman Branch	S-CR-LAG-17/01/09-03	129.8	Intermittent	2.1	Open cut	A, E, G	Warm water
Tributary to Deadman Branch	S-CR-LAG-17/01/09-05	130.0	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Deadman Branch	S-CR-LAG-17/01/09-04	130.0	Intermittent	4.0	Open cut	A, E, G	Warm water
Unnamed Pond	S-CR-LAG-17/01/09-07	130.3	Pond	NA	NA	A, E, G	Warm water
Tributary to Big Branch	S-CR-AAL-17/01/09-05	131.1	Intermittent	5.2	Open cut	A, E, G	Warm water
Tributary to Big Branch	S-CR-LAG-17/01/09-08	131.6	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Big Branch	S-CR-AAL-17/01/09-06	131.6	Intermittent	2.0	Open cut	A, E, G	Warm water
Tributary to Big Branch	S-CR-AAL-17/01/20-01	131.7	Ephemeral	3.1	Open cut	A, E, G	Warm water
Tributary to Big Branch	S-CR-LAG-17/01/20-02	131.9	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Big Branch	S-CR-LAG-17/01/20-01a	131.9	Intermittent	1.0	Open cut	A, E, G	Warm water
Tributary to Big Branch	S-CR-WCR-17/01/09-01a	132.6	Ephemeral	1.0	Open cut	A, E, G	Warm water
Tributary to Big Branch	S-CR-WCR-17/01/10-03	132.8	Ephemeral	2.5	Open cut	A, E, G	Warm water
Tributary to Big Branch	S-CR-WCR-17/01/10-01	133.2	Intermittent	9.4	Open cut	A, E, G	Warm water
Tributary to Big Branch	S-CR-WCR-17/01/10-04	133.6	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Big Branch	S-CR-WCR-17/01/10-06	134.2	Ephemeral	5.3	Open cut	A, E, G	Warm water
Washita River	S-CR-LAG-17/01/10-01	135.9	Perennial	0.0	HDD	A, C, E, G	Warm water
Tributary to Washita River	S-CR-AAL-17/01/10-02	136.4	Intermittent	4.7	Open cut	A, E, G	Warm water
Tributary to Washita River	S-CR-AAL-17/01/10-04	136.8	Perennial	12.8	Dry open cut	A, E, G	Warm water
Tributary to Washita River	S-CR-AAL-17/01/10-06a	137.2	Intermittent	3.5	Open cut	A, E, G	Warm water
Tributary to Washita River	S-CR-AAL-17/01/10-07	137.2	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Washita River	S-CR-AAL-17/01/10-06b	137.2	Intermittent	NA	NA	A, E, G	Warm water

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Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities							
Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b,c}	Fishery Type ^d
Tributary to Washita River	S-CR-LAG-17/01/10-04	138.3	Ephemeral	1.7	Open cut	A, E, G	Warm water
Tributary to Washita River	S-CR-LAG-17/06/28-01	138.3	Ephemeral	12.9	Open cut	A, E, G	Warm water
Tributary to Oil Creek	S-JO-LAG-17/01/20-04b	139.0	Intermittent	2.2	Open cut	A, E, G	Warm water
Tributary to Oil Creek	S-JO-AAL-17/01/20-08	139.1	Ephemeral	4.0	Open cut	A, E, G	Warm water
Tributary to Oil Creek	S-JO-AAL-17/01/20-09	139.2	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Oil Creek	S-JO-AAL-17/01/20-06	139.4	Ephemeral	4.1	Open cut	A, E, G	Warm water
Tributary to Washita River	S-JO-AAL-17/01/21-01	140.1	Ephemeral	2.0	Open cut	A, E, G	Warm water
Tributary to Washita River	S-JO-LAG-17/01/21-01	140.3	Ephemeral	2.1	Open cut	A, E, G	Warm water
Tributary to Washita River	S-JO-LAG-17/01/21-02	140.8	Intermittent	1.0	Open cut	A, E, G	Warm water
Tributary to Washita River	S-JO-AAL-17/01/21-02	140.9	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Washita River	S-JO-LAG-17/01/21-03	141.0	Ephemeral	1.2	Open cut	A, E, G	Warm water
Tributary to Oil Creek	S-JO-AAL-17/01/21-03	141.1	Ephemeral	NA	NA	A, E, G	Warm water
Oil Creek	S-JO-RKT-17/01/21-01	141.4	Perennial	27.7	Dry open cut	A, C, E, G	Warm water
Tributary to Oil Creek	S-JO-TAS-17/12/12-02	141.4	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Oil Creek	S-JO-TAS-17/12/12-03	141.5	Ephemeral	5.1	Open cut	A, E, G	Warm water
Tributary to Oil Creek	S-JO-TAS-17/12/12-04	141.5	Intermittent	79.1	Open cut	A, E, G	Warm water
Tributary to Oil Creek	S-JO-TAS-17/12/12-05	141.6	Intermittent	42.0	Open cut	A, E, G	Warm water
Oil Creek	S-JO-RKT-17/01/21-01	141.8	Perennial	40.6	Dry open cut	A, C, E, G	Warm water
Oil Creek	S-JO-RKT-17/01/21-01	141.9	Perennial	57.6	Dry open cut	A, C, E, G	Warm water
Oil Creek	S-JO-RKT-17/01/21-01	142.0	Perennial	45.0	Dry open cut	A, C, E, G	Warm water
Oil Creek	S-JO-RKT-17/01/21-01	142.1	Perennial	27.3	Dry open cut	A, C, E, G	Warm water
Tributary to Oil Creek	S-JO-TAS-17/12/13-02	142.2	Ephemeral	12.2	Open cut	A, E, G	Warm water

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Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities

Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) *	Proposed Crossing Method *	Water Quality Classification ^{b, c}	Fishery Type ^d
Sycamore Creek	S-JO-EHK-17/02/02-03	143.1	Ephemeral	11.4	Open cut	A, E, G	Warm water
Tributary to Oil Creek	S-JO-TAS-17/12/13-04	143.2	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Sycamore Creek	S-JO-RKT-17/02/02-06	143.4	Ephemeral	5.1	Open cut	A, E, G	Warm water
Tributary to Sycamore Creek	S-JO-EHK-17/02/02-04	143.5	Ephemeral	3.4	Open cut	A, E, G	Warm water
Tributary to Sycamore Creek	S-JO-EHK-17/02/02-04	143.5	Ephemeral	3.5	Open cut	A, E, G	Warm water
Tributary to Sycamore Creek	S-JO-EHK-17/02/02-04	143.5	Ephemeral	2.1	Open cut	A, E, G	Warm water
Tributary to Courtney Creek	S-JO-TAS-17/10/24-04	144.0	Ephemeral	2.7	Open cut	A, E, G	Warm water
Tributary to Courtney Creek	S-JO-TAS-17/10/24-02	144.0	Ephemeral	1.3	Open cut	A, E, G	Warm water
Courtney Creek	S-JO-RFT-16/12/17-08	144.2	Perennial	10.0	Dry open cut	A, E, G	Warm water
Tributary to Mill Creek	S-JO-EHK-17/02/02-05	145.0	Ephemeral	5.3	Open cut	A, E, G	Warm water
Tributary to Mill Creek	S-JO-TAS-17/10/24-01	145.0	Ephemeral	1.0	Open cut	A, E, G	Warm water
Mill Creek	S-JO-EHK-17/02/02-06	146.0	Perennial	10.0	Dry open cut	A, C, E, G	Warm water
Tributary to Washita River	S-JO-RFT-16/12/17-03	148.2	Ephemeral	5.9	Open cut	A, E, G	Warm water
Tributary to Washita River	S-JO-RFT-17/02/03-05	149.0	Intermittent	5.4	Open cut	A, E, G	Warm water
Tributary to Washita River	S-JO-RFT-17/02/03-04	149.0	Intermittent	9.4	Open cut	A, E, G	Warm water
Unnamed Pond	S-JO-RFT-17/02/03-02	149.3	Pond	148.1	Open cut	A, E, G	Warm water
Sand Creek	S-JO-AAL-17/01/10-08	150.3	Intermittent	11.3	Open cut	A, E, G	Warm water
Tributary to Sand Creek	S-JO-AAL-17/01/10-09	150.3	Intermittent	7.6	Open cut	A, E, G	Warm water
Tributary to Sand Creek	S-JO-LAG-17/01/10-07	150.6	Ephemeral	1.1	Open cut	A, E, G	Warm water
Tributary to Rock Creek	S-JO-LAG-17/01/10-06	151.0	Ephemeral	NA	NA	A, E, G	Warm water
Rock Creek	S-JO-WCR-17/01/10-07a	151.7	Perennial	0.0	HDD	A, E, G	Warm water
Tributary to Rock Creek	S-JO-WCR-17/01/10-07b	151.7	Perennial	NA	HDD *	A, E, G	Warm water

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Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities							
Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) *	Proposed Crossing Method *	Water Quality Classification b, c	Fishery Type d
Tributary to Rock Creek	S-JO-AAL-17/01/11-01	152.8	Intermittent	3.3	Open cut	A, E, G	Warm water
Tributary to Pennington Creek	S-JO-AJF-17/01/11-04	153.2	Ephemeral	9.3	Open cut	A, E, G	Warm water
Tributary to Pennington Creek	S-JO-AJF-17/01/11-04	153.3	Ephemeral	6.4	Open cut	A, E, G	Warm water
Unnamed Pond	S-JO-AJF-17/01/11-03	153.5	Pond	NA *	NA *	A, E, G	Warm water
Tributary to Pennington Creek	S-JO-LAG-17/01/11-01	153.6	Intermittent	NA	NA	A, E, G	Warm water
Tributary to Pennington Creek	S-JO-AJF-17/01/11-02	153.6	Intermittent	5.0	Open cut	A, E, G	Warm water
Pennington Creek	S-JO-AJF-17/01/11-01	154.1	Perennial	0.0	HDD	A, C, E, G	Cool Water, HQW
Tributary to Pennington Creek	S-JO-TAS-17/01/11-01	154.6	Intermittent	9.6	Open cut	A, E, G	Warm water
Tributary to Pennington Creek	S-JO-TAS-17/01/11-04	154.6	Perennial	20.7	Open cut	A, E, G	Warm water
Tributary to Pennington Creek	S-JO-TAS-17/01/11-05	154.6	Intermittent	4.5	Open cut	A, E, G	Warm water
Tributary to Pennington Creek	S-JO-TAS-17/01/11-05	154.6	Intermittent	4.1	Dry open cut	A, E, G	Warm water
Tributary to Pennington Creek	S-JO-TAS-17/01/11-02	154.6	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Pennington Creek	S-JO-TAS-17/01/11-03	154.8	Intermittent	10.2	Open cut	A, E, G	Warm water
Tributary to Pennington Creek	S-JO-TAS-17/01/11-10	155.1	Intermittent	9.4	Open cut	A, E, G	Warm water
Tributary to Little Sandy Creek	S-JO-TAS-17/01/11-11	156.0	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Little Sandy Creek	S-JO-AJF-17/01/11-08	156.7	Ephemeral	4.9	Open cut	A, E, G	Warm water
Tributary to Little Sandy Creek	S-JO-AJF-17/01/11-08	156.7	Ephemeral	3.1	Open cut	A, E, G	Warm water
Tributary to Little Sandy Creek	S-JO-AAL-17/01/11-02	156.7	Intermittent	NA	NA	A, E, G	Warm water
Tributary to Little Sandy Creek	S-JO-AJF-17/01/11-08	156.8	Ephemeral	3.0	Open cut	A, E, G	Warm water
Little Sandy Creek	S-JO-AAL-17/01/24-01	156.9	Perennial	12.2	Dry open cut	A, E, G	Warm water
Big Sandy Creek	S-JO-AAL-17/01/24-02	157.7	Perennial	20.5	Dry open cut	A, E, G	Warm water

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APPENDIX J (cont'd)
Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities

Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) *	Proposed Crossing Method *	Water Quality Classification ^{b, c}	Fishery Type ^a
Tributary to Big Sandy Creek	S-JO-EHK-17/01/13-10a	157.8	Ephemeral	3.8	Open cut	A, E, G	Warm water
Tributary to Big Sandy Creek	S-JO-EHK-17/01/13-10c	157.8	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Big Sandy Creek	S-JO-EHK-17/01/13-10d	157.8	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Big Sandy Creek	S-JO-EHK-17/01/13-10b	157.8	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Big Sandy Creek	S-JO-EHK-17/01/13-07	158.4	Intermittent	35.2	Open cut	A, E, G	Warm water
Tributary to Lake Texoma	S-JO-EHK-17/01/13-12	159.1	Ephemeral	1.0	Open cut	A, E, G	Warm water
Tributary to Lake Texoma	S-JO-WCR-17/01/13-02	159.1	Intermittent	2.2	Open cut	A, E, G	Warm water
Tributary to Lake Texoma	S-JO-RFT-17/02/06-03	159.9	Perennial	5.1	Open cut	A, E, G	Warm water
Tributary to Lake Texoma	S-JO-RFT-17/02/06-10	161.2	Ephemeral	3.1	Open cut	A, E, G	Warm water
Tributary to Lake Texoma	S-JO-AJF-17/01/13-01	161.7	Intermittent	2.1	Open cut	A, E, G	Warm water
Tributary to Butcher Pen Creek	S-JO-LAG-17/01/14-08	162.2	Ephemeral	NA	NA	A, E, G	Warm water
Unnamed Pond	S-JO-LAG-17/01/14-05	162.2	Pond	21.5	Open cut	A, E, G	Warm water
Tributary to Butcher Pen Creek	S-JO-LAG-17/01/14-03	162.9	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Butcher Pen Creek	S-JO-LAG-17/01/14-02a	163.0	Intermittent	2.7	Open cut	A, E, G	Warm water
Butcher Pen Creek	S-JO-LAG-17/01/14-01	163.2	Intermittent	11.8	Open cut	A, E, G	Warm water
Tributary to Butcher Pen Creek	S-JO-EHK-17/01/14-03	163.9	Ephemeral	2.8	Open cut	A, E, G	Warm water
Unnamed Pond	S-JO-EHK-17/01/14-04	164.3	Pond	56.1	Open cut	A, E, G	Warm water
Tributary to Rock Creek	S-JO-RKT-17/06/23-01	165.7	Ephemeral	8.4	Open cut	A, E, G	Warm water
Tributary to Blue River	S-JO-WCR-17/01/16-04	167.2	Intermittent	NA	NA	A, E, G	Warm water
Horse Creek	S-JO-EHK-17/01/14-14	168.5	Intermittent	10.7	Open cut	A, E, G	Warm water
Tributary to Horse Creek	S-JO-AJF-17/01/14-01	168.9	Intermittent	28.2	Open cut	A, E, G	Warm water
Tributary to Horse Creek	S-JO-AJF-17/01/14-02	169.9	Ephemeral	4.5	Open cut	A, E, G	Warm water

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APPENDIX J (cont'd)							
Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities							
Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b, c}	Fishery Type ^d
Tributary to Horse Creek	S-BR-AJF-17/01/14-03	170.4	Intermittent	8.9	Open cut	A, E, G	Warm water
Tributary to Horse Creek	S-BR-LAG-17/01/14-09	170.7	Ephemeral	7.1	Open cut	A, E, G	Warm water
Tributary to Blue River	S-BR-TAS-17/01/16-07	171.8	Intermittent	10.1	Open cut	A, E, G	Warm water
Tributary to Blue River	S-BR-TAS-17/01/16-08a	171.9	Intermittent	20.7	Open cut	A, E, G	Warm water
Tributary to Blue River	S-BR-WCR-17/01/16-02	172.1	Intermittent	29.8	Open cut	A, E, G	Warm water
Tributary to Blue River	S-BR-TAS-17/01/16-06	172.7	Ephemeral	11.8	Open cut	A, E, G	Warm water
Tributary to Blue River	S-BR-TAS-17/01/16-05a	172.9	Ephemeral	4.6	Open cut	A, E, G	Warm water
Tributary to Blue River	S-BR-TAS-17/01/16-04	173.0	Ephemeral	4.0	Open cut	A, E, G	Warm water
Tributary to Blue River	S-BR-AAL-17/01/14-04	173.2	Intermittent	4.2	Open cut	A, E, G	Warm water
Tributary to Blue River	S-BR-TAS-17/01/14-04	173.6	Ephemeral	13.1	Open cut	A, E, G	Warm water
Tributary to Blue River	S-BR-RKT-17/06/23-02	173.9	Ephemeral	0.0	HDD	A, E, G	Warm water
Tributary to Blue River	S-BR-LAG-17/06/26-01	173.9	Ephemeral	0.0	HDD	A, E, G	Warm water
Blue River	S-BR-AAL-17/01/14-06	174.0	Perennial	0.0	HDD	A, C, E, G, NRI	Warm water
Tributary to Blue River	S-BR-TAS-17/01/16-03	174.0	Ephemeral	0.0	HDD	A, E, G	Warm water
Tributary to Blue River	S-BR-TAS-17/01/16-02	174.5	Ephemeral	5.6	Open cut	A, E, G	Warm water
Tributary to Blue River	S-BR-TAS-17/01/16-01	174.8	Intermittent	27.5	Open cut	A, E, G	Warm water
Tributary to Blue River	S-BR-TAS-17/01/16-01	174.9	Intermittent	14.7	Open cut	A, E, G	Warm water
Tributary to Simon Creek	S-BR-AAL-17/01/14-02	175.9	Ephemeral	21.5	Open cut	A, E, G	Warm water
Tributary to Simon Creek	S-BR-AAL-17/01/14-02	176.0	Ephemeral	2.1	Open cut	A, E, G	Warm water
Tributary to Simon Creek	S-BR-AAL-17/01/14-02	176.0	Ephemeral	2.2	Open cut	A, E, G	Warm water
Tributary to Simon Creek	S-BR-AAL-17/01/14-02	176.0	Ephemeral	9.8	Open cut	A, E, G	Warm water
Tributary to Simon Creek	S-BR-AAL-17/01/14-02	176.2	Ephemeral	2.4	Open cut	A, E, G	Warm water

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Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities

Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b,c}	Fishery Type ^d
Simon Creek	AS-BR-NHD-Line-79	178.3	Intermittent	11.2	Open cut	A, E, G	Warm water
Tributary to Johnson Creek	S-BR-AJF-17/06/27-05	177.5	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Johnson Creek	S-BR-TAS-17/01/14-02	177.5	Ephemeral	7.1	Open cut	A, E, G	Warm water
Tributary to Johnson Creek	S-BR-TAS-17/01/13-04	178.0	Ephemeral	4.6	Open cut	A, E, G	Warm water
Johnson Creek	S-BR-TAS-17/01/13-06	178.5	Intermittent	9.0	Open cut	A, E, G	Warm water
Tributary to Johnson Creek	S-BR-TAS-17/01/13-08	178.6	Ephemeral	NA	NA	A, E, G	Warm water
Tributary to Thompson Creek	S-BR-TAS-17/01/13-03	179.4	Ephemeral	6.4	Open cut	A, E, G	Warm water
Thompson Creek	S-BR-TAS-17/01/13-05	179.9	Intermittent	4.0	Open cut	A, E, G	Warm water
Hanington Creek	S-BR-TAS-17/01/13-01	180.2	Ephemeral	4.0	Open cut	A, E, G	Warm water
Tributary to Caddo Creek	S-BR-AAL-17/01/26-01	180.9	Intermittent	5.0	Open cut	A, E, G	Warm water
Tributary to Caddo Creek	S-BR-TAS-17/10/25-07	181.1	Ephemeral	102.4	Open cut	A, E, G	Warm water
Tributary to Caddo Creek	S-BR-TAS-17/10/25-06	181.3	Ephemeral	2.0	Open cut	A, E, G	Warm water
Caddo Creek	S-BR-TAS-17/01/13-02	182.0	Intermittent	6.7	Dry open cut	A, E, G	Warm water
Tributary to Caddo Creek	S-BR-TAS-17/01/13-06	182.5	Intermittent	6.0	Open cut	A, E, G	Warm water
Tributary to Caddo Creek	S-BR-TAS-17/01/12-06	183.4	Ephemeral	4.5	Open cut	A, E, G	Warm water
Elm Creek	S-BR-TAS-17/01/11-06	184.1	Intermittent	20.0	Open cut	A, E, G	Warm water
Tributary to Mail Rider Creek	S-BR-TAS-17/01/12-06	186.1	Ephemeral	4.0	Open cut	A, E, G	Warm water
Tributary to Mail Rider Creek	S-BR-TAS-17/01/12-06	186.1	Ephemeral	4.3	Open cut	A, E, G	Warm water
Mail Rider Creek	S-BR-TAS-17/01/12-08	186.1	Perennial	22.8	Dry open cut	A, E, G	Warm water
Tributary to Mail Rider Creek	AS-BR-NHD-Line-152	186.4	Intermittent	6.1	Open cut	A, E, G	Warm water
Tributary to Mail Rider Creek	S-BR-TAS-17/01/12-04	186.7	Ephemeral	NA	NA	A, E, G	Warm water
Rock Branch	S-BR-TAS-17/01/12-10	188.0	Intermittent	4.7	Open cut	A, E, G	Warm water

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Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities						
Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b,c}
Unnamed Pond	S-BR-LAG-17/01/12-03	190.2	Pond	9.7	Open cut	A, E, G
Tributary to Bokchito Creek	S-BR-AJF-17/01/12-06	190.8	Ephemeral	5.0	Open cut	A, E, G
Bokchito Creek	S-BR-AJF-17/01/12-02	191.5	Perennial	27.7	Dry open cut	A, E, G
Unnamed Pond	S-BR-AJF-17/01/12-11	191.8	Pond	45.1	Open cut	A, E, G
Tributary to Bokchito Creek	S-BR-AJF-17/01/12-03	192.3	Ephemeral	7.3	Open cut	A, E, G
Tributary to Bokchito Creek	S-BR-AJF-17/01/12-04	192.4	Ephemeral	2.0	Open cut	A, E, G
Tributary to Bokchito Creek	S-BR-AJF-17/01/12-05	192.5	Ephemeral	4.0	Open cut	A, E, G
Unnamed Pond	S-BR-RKT-17/01/12-01	194.3	Pond	66.1	Open cut	A, E, G
Sassafras Creek	AS-BR-NHD-Line-89	194.8	Perennial	22.8	Dry open cut	A, E, G
Sulphur Creek	AS-BR-NHD-Line-195	195.7	Perennial	21.0	Dry open cut	A, E, G
McGee Creek	S-BR-AJF-17/01/12-01	196.4	Intermittent	16.8	Open cut	A, E, G
Tributary to Sulphur Creek	S-BR-WCR-17/01/05-04b	197.5	Intermittent	7.1	Open cut	A, E, G
Tributary to Sulphur Creek	S-BR-WCR-17/01/05-04a	197.6	Intermittent	NA	NA	A, E, G
Tributary to Sulphur Creek	S-BR-WCR-17/01/05-03	198.6	Ephemeral	8.0	Open cut	A, E, G
Tributary to Sulphur Creek	S-BR-WCR-17/01/05-02	199.3	Ephemeral	1.0	Open cut	A, E, G
MAINLINE - ACCESS ROADS						
Tributary to Buggy Creek	S-GR-WCR-16/12/10-06	34.8	Ephemeral	NA	Existing access road	A, E, G
Unnamed Pond	S-GR-RKT-17/01/23-04	44.2	Pond	NA	Existing access road	A, E, G
Slough Creek	S-GR-WCR-16/12/14-01	69.3	Perennial	NA	Existing access road	A, E, G
Tributary to Wildhorse Creek	S-GA-RFT-17/02/17-02	100.5	Ephemeral	NA	Existing access road	A, E, G
Tributary to Flat Creek	S-CR-LAG-17/01/25-01	102.2	Ephemeral	NA	Existing access road	A, E, G
Tributary to Bear Creek	S-CR-LAG-17/01/25-03	106.2	Ephemeral	NA	Existing access road	A, E, G

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Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities							
Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) *	Proposed Crossing Method *	Water Quality Classification **,c	Fishery Type ^d
Tributary to West Spring Creek	S-CR-LAG-17/01/25-04	110.4	Ephemeral	NA	Existing access road	A, E, G	Warm water
Tributary to West Spring Creek	S-CR-LAG-17/01/25-05	110.6	Intermittent	NA	Existing access road	A, E, G	Warm water
Tributary to West Spring Creek	S-CR-LAG-17/01/25-06	110.9	Ephemeral	NA	Existing access road	A, E, G	Warm water
Tributary to Phillips Creek	S-CR-LAG-17/01/24-03	124.0	Intermittent	NA	Existing access road	A, E, G	Warm water
Unnamed Pond	S-CR-RFT-17/02/08-02	134.6	Pond	NA	Existing access road	A, E, G	Warm water
Tributary to Washita River	S-CR-AAL-17/01/25-04	136.3	Ephemeral	NA	Existing access road	A, E, G	Warm water
Courtney Creek	S-JO-RFT-16/12/17-08	144.2	Perennial	NA	Existing access road	A, E, G	Warm water
Tributary to Mill Creek	S-JO-EHK-17/02/02-05	145.0	Ephemeral	NA	Existing access road	A, E, G	Warm water
Tributary to Mill Creek	S-JO-TAS-17/10/24-01	145.0	Ephemeral	NA	Existing access road	A, E, G	Warm water
CHISHOLM LATERAL							
Unnamed Pond	S-KI-F-JN-17/07/10-03	CH1.0	Pond	NA	NA	A, E, G	Warm water
Tributary to Campbell Creek	S-KI-EHK-17/01/17-05b	CH1.3	Intermittent	2.0	Open cut	A, E, G	Warm water
Tributary to Campbell Creek	S-KI-EHK-17/01/17-05a	CH1.3	Perennial	6.1	Open cut	A, E, G	Warm water
Tributary to Campbell Creek	S-KI-EHK-17/01/17-06	CH3.5	Ephemeral	2.1	Open cut	A, E, G	Warm water
Tributary to Campbell Creek	S-KI-EHK-17/01/17-10	CH3.9	Ephemeral	2.0	Open cut	A, E, G	Warm water
Tributary to Campbell Creek	S-KI-RKT-17/01/17-23	CH4.2	Ephemeral	2.0	Open cut	A, E, G	Warm water
Campbell Creek	S-KI-RKT-17/01/17-22	CH4.3	Ephemeral	2.1	Open cut	A, E, G	Warm water
Tributary to Clear Creek	S-KI-RKT-17/01/17-09	CH5.9	Ephemeral	2.0	Open cut	A, E, G	Warm water
Tributary to Clear Creek	S-KI-EHK-17/01/17-01	CH6.2	Intermittent	17.3	Open cut	A, E, G	Warm water
Tributary to Clear Creek	S-KI-RKT-17/01/17-04	CH6.5	Ephemeral	2.9	Open cut	A, E, G	Warm water
Clear Creek	S-KI-WCR-17/01/17-01	CH7.6	Perennial	16.3	Dry open cut	A, E, G	Warm water
Tributary to Clear Creek	S-KI-WCR-17/01/17-02	CH7.9	Ephemeral	16.3	Open cut	A, E, G	Warm water

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Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities						
Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b,c}
Tributary to Clear Creek	S-KI-WCR-17/01/17-03	CH8.1	Perennial	6.0	Open cut	A, E, G
Tributary to Clear Creek	S-KI-RKT-17/07/12-11	CH8.5	Intermittent	NA	NA	A, E, G
Uncle Johns Creek	S-KI-TAS-17/01/17-01	CH9.5	Perennial	40.0	Dry open cut	A, E, G
Tributary to Uncle Johns Creek	S-KI-TAS-17/01/17-02	CH9.8	Ephemeral	2.1	Open cut	A, E, G
Tributary to Uncle Johns Creek	S-KI-TAS-17/07/12-02	CH10.2	Ephemeral	5.8	Open cut	A, E, G
Tributary to Uncle Johns Creek	S-KI-AJF-17/01/17-02	CH11.9	Perennial	8.8	Open cut	A, E, G
Tributary to Uncle Johns Creek	S-KI-LAG-17/01/17-03	CH13.3	Intermittent	1.0	Open cut	A, E, G
Tributary to Winter Camp Creek	S-KI-AAL-17/01/17-01	CH14.6	Intermittent	7.6	Open cut	A, E, G
Tributary to Winter Camp Creek	S-KI-LAG-17/01/17-04	CH15.2	Ephemeral	NA	NA	A, E, G
Tributary to Winter Camp Creek	S-KI-AAL-17/01/17-02	CH15.2	Ephemeral	3.3	Open cut	A, E, G
Tributary to Winter Camp Creek	S-KI-LAG-17/01/17-05	CH16.4	Perennial	20.0	Dry open cut	A, E, G
Tributary to Winter Camp Creek	S-KI-RKT-17/01/17-29	CH18.5	Ephemeral	NA	NA	A, E, G
Tributary to Winter Camp Creek	S-KI-RKT-17/01/17-33	CH19.2	Ephemeral	2.0	Open cut	A, E, G
ACCESS ROADS - CHISHOLM LATERAL						
Tributary to Winter Camp Creek	S-KI-LAG-17/01/17-05	CH16.4	Perennial	NA	Existing access road	A, E, G
Velma Lateral						
Tributary to Wildhorse Creek	S-ST-WCR-17/04/11-01	VE0.2	Intermittent	6.2	Open cut	A, E, G
Tributary to Wildhorse Creek	S-ST-WCR-17/04/11-01	VE0.2	Intermittent	NA	NA	A, E, G
Tributary to Wildhorse Creek	S-ST-WCR-17/04/11-03	VE0.7	Intermittent	34.5	Open cut	A, E, G
Tributary to Wildhorse Creek	S-ST-WCR-17/04/11-02	VE1.0	Perennial	7.7	Dry open cut	A, E, G
Tributary to Wildhorse Creek	S-ST-WCR-17/04/11-04	VE1.9	Perennial	11.2	Dry open cut	A, E, G
Tributary to Wildhorse Creek	S-ST-WCR-17/04/11-05	VE2.2	Perennial	26.1	Dry open cut	A, C, E, G

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Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b, c}	Fishery Type ^d
Wildhorse Creek	S-ST-RKT-17/04/12-02	VE2.5	Perennial	23.8	Dry open cut	A, E, G	Warm water
Unnamed Pond	S-ST-RKT-17/04/11-31	VE3.3	Pond	24.4	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-ST-RKT-17/04/11-33	VE3.4	Ephemeral	10.0	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-ST-RKT-17/04/11-35	VE3.5	Ephemeral	15.8	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-ST-RKT-17/04/11-35	VE3.5	Ephemeral	15.9	Open cut	A, E, G	Warm water
Tributary to Black Bear Creek	S-ST-RKT-17/04/11-21	VE4.5	Perennial	15.0	Dry open cut	A, E, G	Warm water
Black Bear Creek	S-ST-RKT-17/04/11-14	VE4.8	Perennial	23.0	Dry open cut	A, C, E, G	Warm water
Tributary to Wildhorse Creek	S-ST-RFT-17/04/10-02	VE6.2	Perennial	6.4	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-ST-RFT-17/04/10-05b	VE6.5	Ephemeral	14.3	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-ST-RFT-17/04/10-05a	VE6.5	Intermittent	3.0	Open cut	A, E, G	Warm water
Unnamed Pond	S-ST-RFT-17/04/10-13	VE7.0	Pond	17.0	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-ST-RFT-17/04/10-10	VE7.1	Ephemeral	2.4	Dry open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	AS-ST-NHD-Line-168	VE7.7	Intermittent	8.3	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-CR-RFT-17/04/11-03	VE9.4	Perennial	0.0	HDD	A, E, G	Warm water
Tributary to Wildhorse Creek	S-CR-RFT-17/04/10-23	VE10.7	Perennial	15.0	Dry open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-CR-WCR-17/04/10-05	VE11.0	Ephemeral	1.6	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-CR-WCR-17/04/10-03	VE11.4	Intermittent	0.0	HDD	A, E, G	Warm water
Tributary to Wildhorse Creek	S-CR-TAS-17/10/27-06	VE11.5	Intermittent	0.0	HDD	A, E, G	Warm water
Tributary to Wildhorse Creek	S-GA-WCR-17/04/10-01	VE12.8	Ephemeral	1.4	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-GA-WCR-17/04/10-02a	VE13.3	Intermittent	6.3	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-GA-WCR-17/04/10-02b	VE13.3	Intermittent	6.0	Open cut	A, E, G	Warm water
Tributary to Wildhorse Creek	S-GA-WCR-17/04/10-02c	VE13.3	Ephemeral	8.6	Open cut	A, E, G	Warm water

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APPENDIX J (cont'd)

Waterbodies Crossed by the Midcontinent Supply Header Interstate Pipeline Project Pipeline Facilities

Facility/Waterbody Name	Waterbody ID	Begin Milepost	Flow Type	Crossing Width (feet) ^a	Proposed Crossing Method ^a	Water Quality Classification ^{b, c}	Fishery Type ^d
<p>Sources: Oklahoma Water Resources Board. 2017. Water Quality Standards, About the Program. Available online at https://www.owrb.ok.gov/quality/standards/standards.php. Accessed August 2017.</p> <p>National Park Service. 2017. Nationwide Rivers Inventory. Oklahoma Segments. Available online at https://www.nps.gov/nrcr/programs/rtrca/nri/states/ok.html. Accessed July 2017.</p> <p>Oklahoma Water Resources Board. 2017. Surface Water Data. Available online at http://www.owrb.ok.gov/maps/PMG/owrbdata_SW.html. Accessed August 2017.</p>							
^a NA	Waterbody is within the proposed construction workspace but would not be crossed by the pipeline segments.						
^b	Oklahoma Water Resources Board, Water Quality Standards (2017):						
A	Primary Body Contact Recreation						
B	Secondary Contact Recreation						
C	Public and Private Water Supply						
D	Fish and Wildlife Propagation						
E	Agriculture						
F	Navigation						
G	Aesthetics						
H	Emergency Public and Private Water Supply						
^c NRI	Waterbody is included on the Nationwide Rivers Inventory at the proposed crossing location.						
^d	Fishery Type as designated by the Oklahoma Water Resources Board, as subcategories under Fish and Wildlife Propagation:						
Habitat Limited	Waterbody where water chemistry, and habitat are not adequate to support a Warm Water Aquatic Community.						
Warm Water	Waterbody where water quality and habitat are adequate to support intolerant climax fish communities and includes an environment suitable for the full range of warm water benthos.						
Cool Water	Waterbody where water quality, water temperature, and habitat are adequate to support cool water climax fish communities and includes an environment suitable for the full range of cool water benthos. Typical species may include smallmouth bass, certain darters, and stoneflies.						
Trout Fishery	Waterbody where water quality, water temperature, and habitat are adequate to support a seasonal put and take trout fishery. Typical species may include trout.						
Special provisions designated by the OWRB (OWRB, 2017):							
HQW	High Quality Waters						
ORW	Outstanding Resource Waters						
NLW	Nutrient Limited Watersheds						
SR	Scenic Rivers						
SWPA	Source Water Protection Areas						
SWS	Sensitive Water Supplies						
^e ATWS	placed adjacent to, but does not cross, the waterbody.						

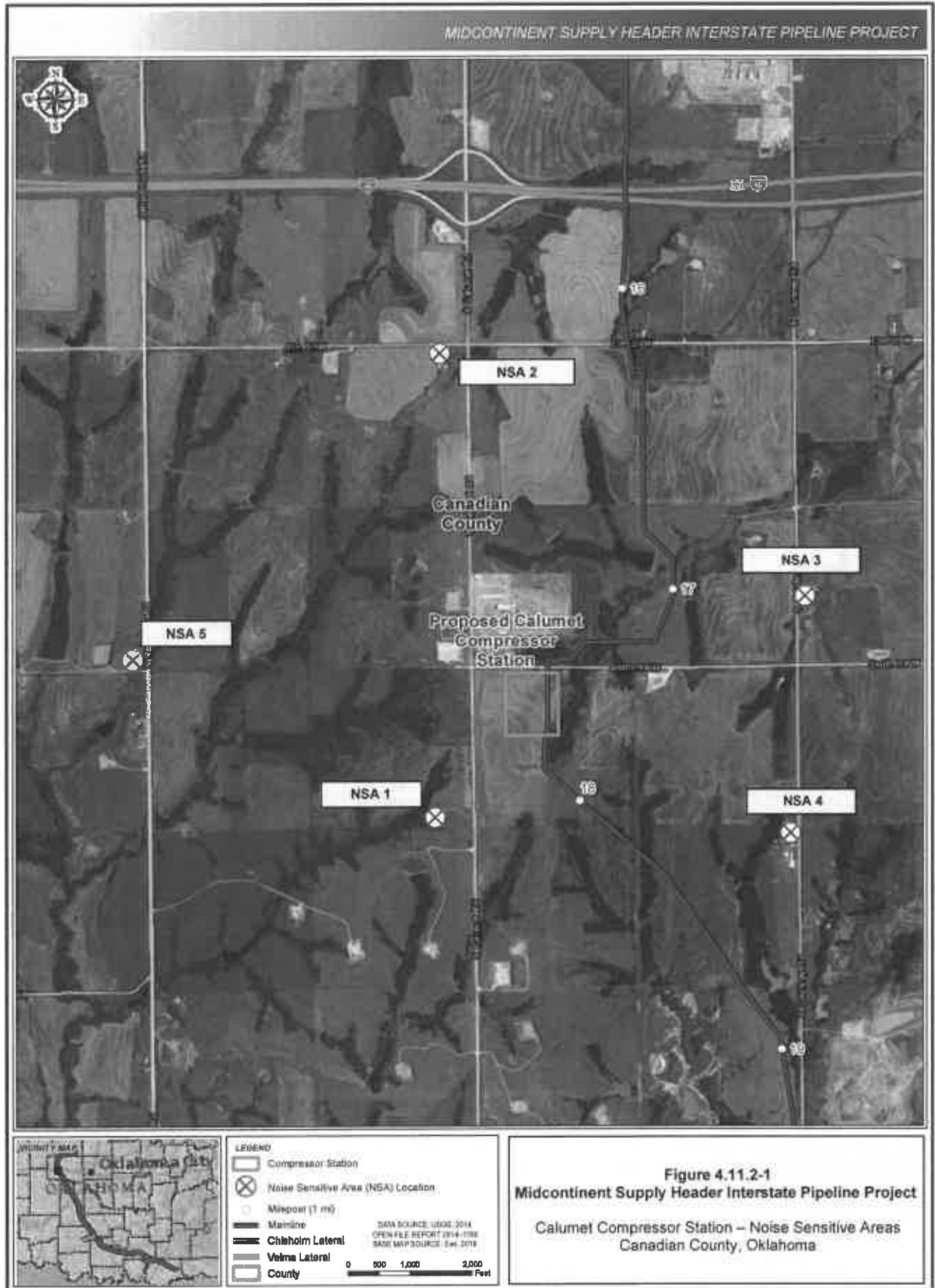
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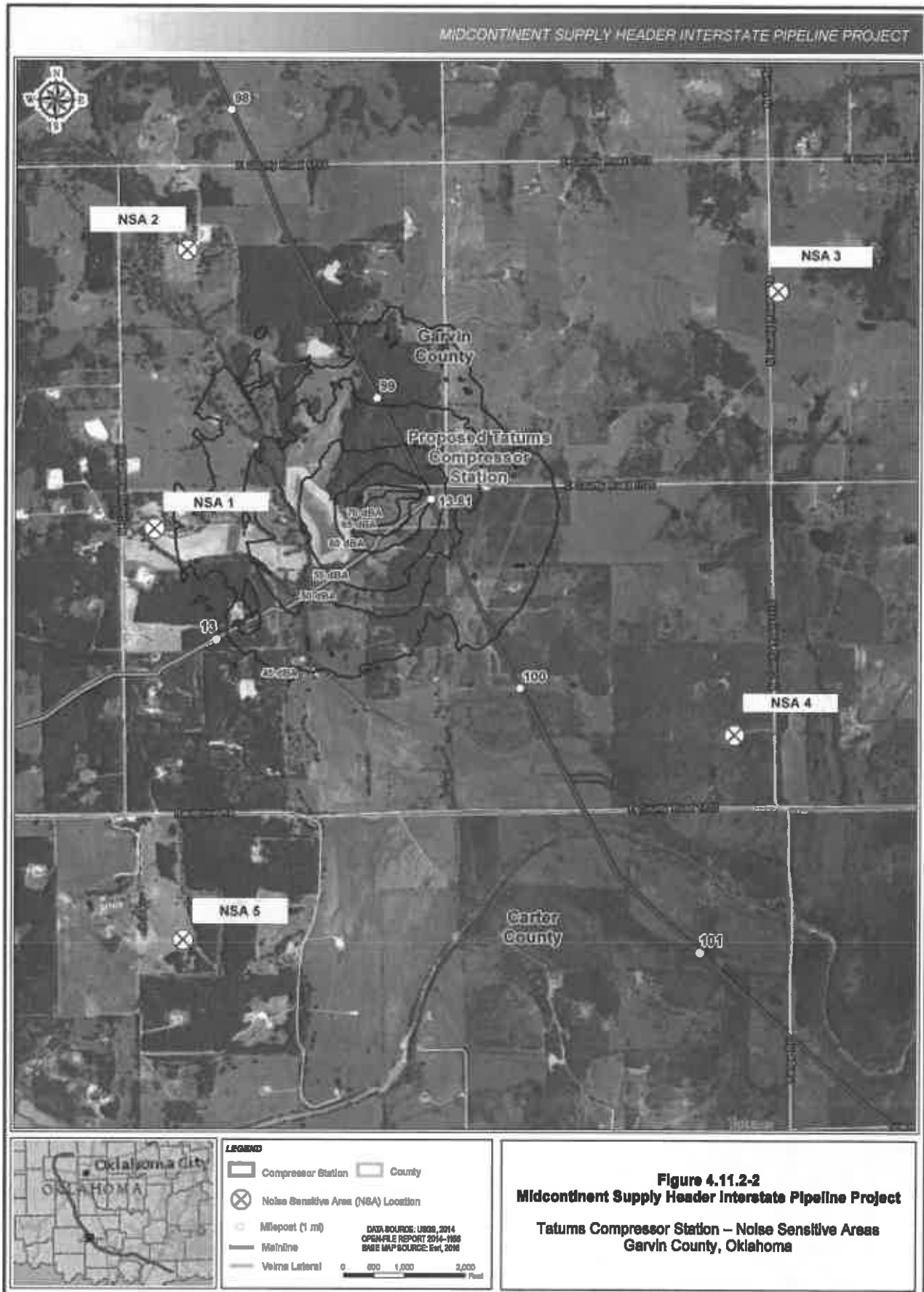
APPENDIX K
NOISE FIGURES

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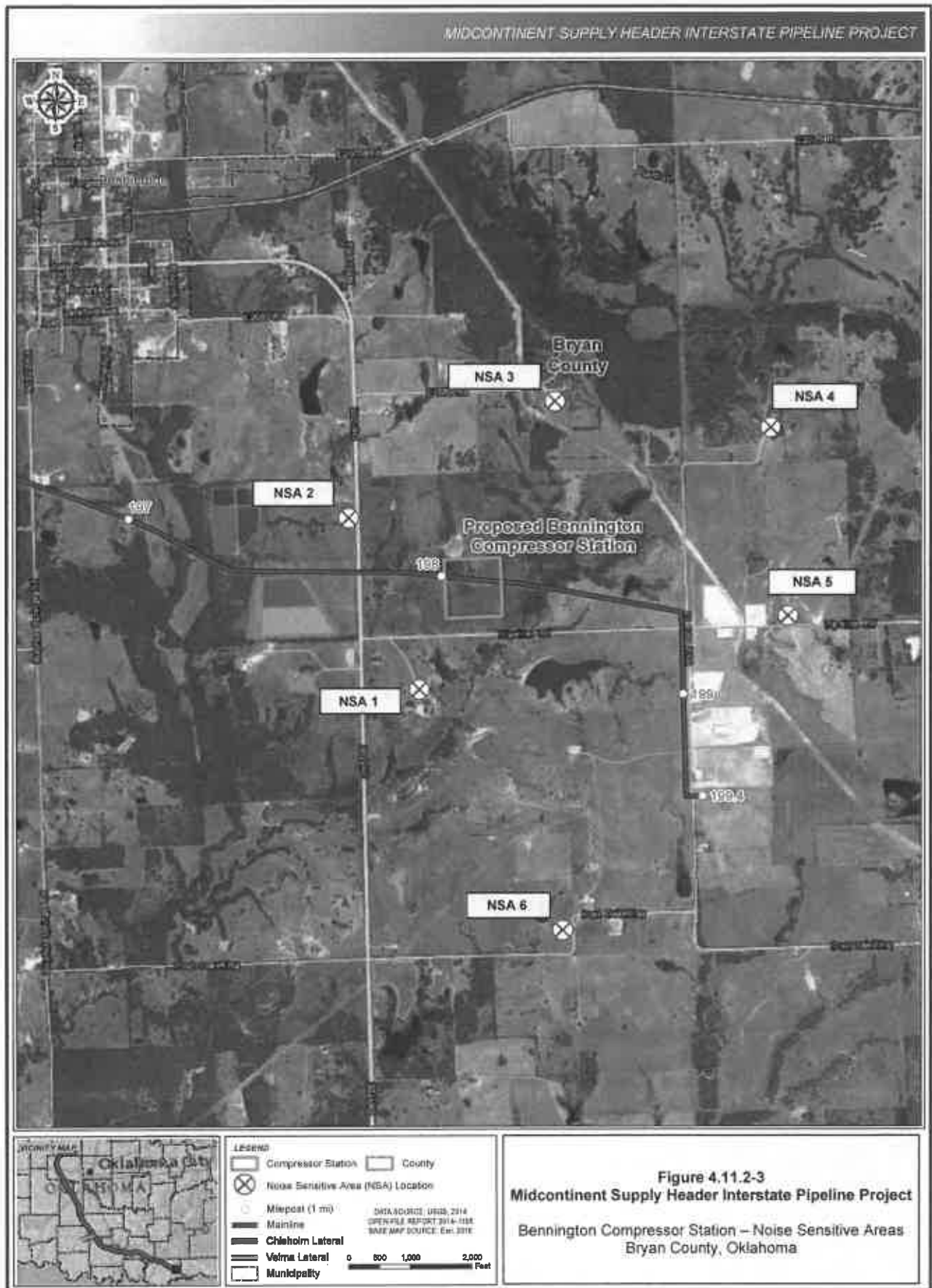
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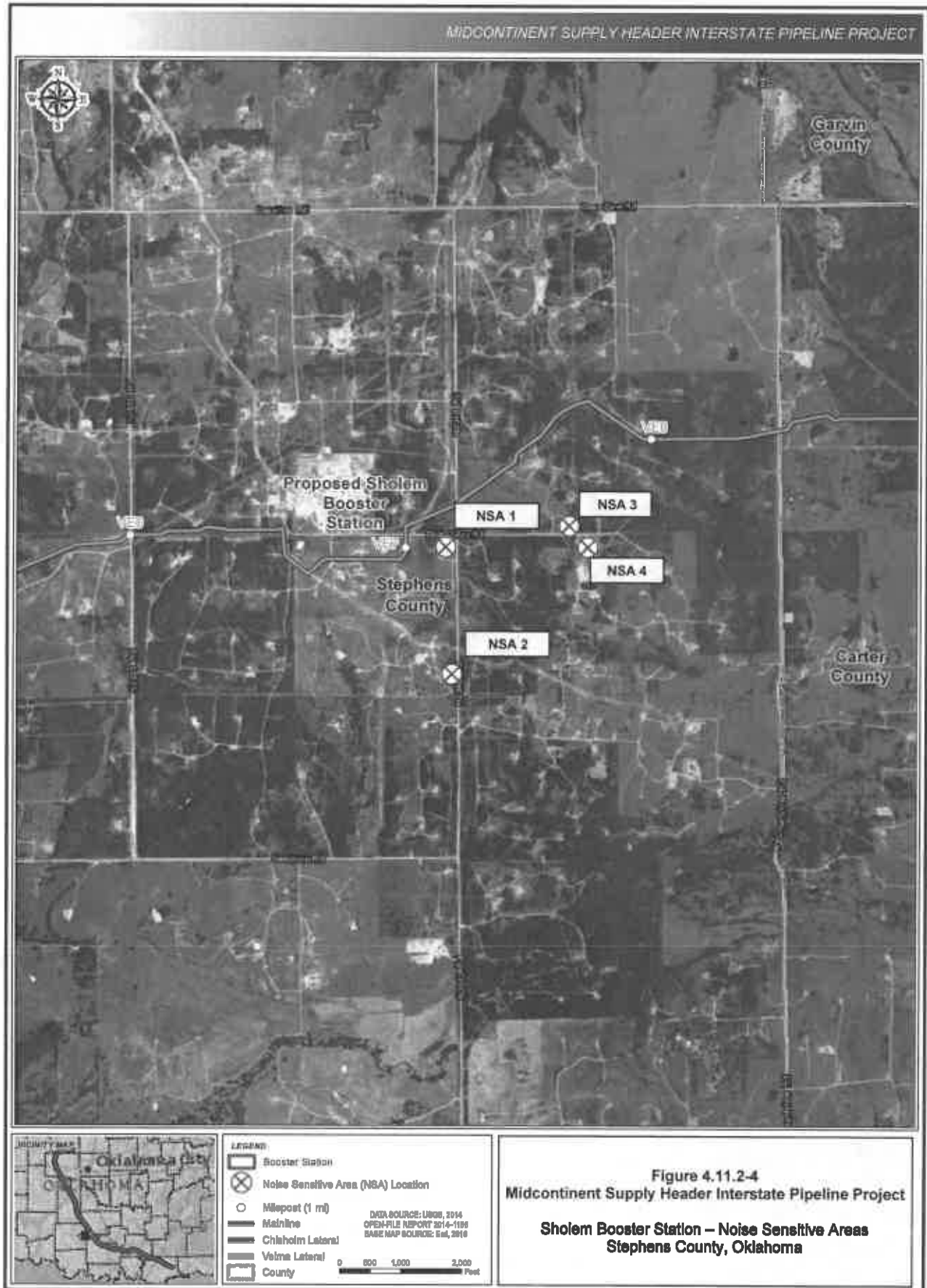
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APPENDIX L

**PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE PROJECTS
WITH POTENTIAL FOR CUMULATIVE IMPACTS
WHEN COMBINED WITH THE
MIDCONTINENT SUPPLY HEADER INTERSTATE PIPELINE PROJECT**

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APPENDIX L						
Past, Present, and Reasonably Foreseeable Future Projects with Potential for Cumulative Impacts when Combined with the Midcontinent Supply Header Interstate Pipeline (MIDSHIP) Project						
Status	Project	County	Construction/ Operation Status	Description	Resources Affected	Location Relative to the MIDSHIP Project ^a
NON-JURISDICTIONAL PROJECT RELATED ACTIONS						
PRESENT	Okarche/Mark West Meter Station	Kingfisher	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 54 feet of line heading east from the Okarche/Mark West Meter Station.
PRESENT	Chisholm Meter Station	Kingfisher	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 690 feet of line heading south from the Chisholm Meter Station.
PRESENT	Mainline Valve 1010-2	Kingfisher	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 115 feet of line heading west from Mainline Valve 1010-2.
PRESENT	Canadian Valley Meter Station	Canadian	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 54 feet of line heading east from the Canadian Valley Meter Station.
PRESENT	Cana Meter Station	Canadian	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 70 feet of line heading west from the Cana Meter Station.
PRESENT	Calumet Compressor Station	Canadian	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 1,453 feet of line heading west from the Calumet Compressor Station.
PRESENT	Grady Meter Station	Garvin	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 94 feet of line heading north from the Grady Meter Station.

APPENDIX L (cont'd)

**Past, Present, and Reasonably Foreseeable Future Projects with Potential for Cumulative Impacts when Combined with the
Midcontinent Supply Header Interstate Pipeline (MIDSHIP) Project**

Status	Project	County	Construction/ Operation Status	Description	Resources Affected	Location Relative to the MIDSHIP Project *
PRESENT	Mainline Valve 1100-2	Grady	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 149 feet of line heading northeast from Mainline Valve 1100-2.
PRESENT	Iron Horse Meter Station	Grady	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 431 feet of line heading southeast from the Iron Horse Meter Station.
PRESENT	Mainline Valve 1100-3	Grady	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 217 feet of line heading south from Mainline Valve 1100-3.
PRESENT	Mainline Valve 1100-4	Grady	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 446 feet of line heading west from Mainline Valve 1100-4.
PRESENT	Mainline Valve 1100-5	Stephens	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 99 feet of line heading south from Mainline Valve 1100-5.
PRESENT	Velma Meter Station	Stephens	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 571 feet of line heading northeast from the Velma Meter Station.
PRESENT	Sholem Booster Station	Stephens	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 487 feet of line heading south from the Sholem Booster Station.

APPENDIX L (cont'd)						
Past, Present, and Reasonably Foreseeable Future Projects with Potential for Cumulative Impacts when Combined with the Midcontinent Supply Header Interstate Pipeline (MIDSHIP) Project						
Status	Project	County	Construction/ Operation Status	Description	Resources Affected	Location Relative to the MIDSHIP Project ^a
PRESENT	Tatums Compressor Station	Garvin	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 1,476 feet of line heading east from the Tatums Compressor Station.
PRESENT	NGPL 801 Meter Station	Carter	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 55 feet of line heading east from the NGPL 801 Meter Station.
PRESENT	Mainline Valve 1200-3	Carter	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 253 feet of line heading west from Mainline Valve 1200-3.
PRESENT	Mainline Valve 1200-4	Johnston	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 948 feet of line heading northeast from Mainline Valve 1200-4.
PRESENT	Mainline Valve 1200-5	Bryan	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 82 feet of line heading east from Mainline Valve 1200-5.
PRESENT	Mainline Valve 1200-6	Bryan	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 160 feet of line heading southeast from Mainline Valve 1200-6.
PRESENT	NGPL Meter Station	Bryan	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 59 feet of line heading south from the NGPL Meter Station.

APPENDIX L (cont'd)						
Past, Present, and Reasonably Foreseeable Future Projects with Potential for Cumulative Impacts when Combined with the Midcontinent Supply Header Interstate Pipeline (MIDSHIP) Project						
Status	Project	County	Construction/ Operation Status	Description	Resources Affected	Location Relative to the MIDSHIP Project ^a
PRESENT	Bennington Compressor Station	Bryan	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 59 feet of line heading south from the Bennington Compressor Station.
PRESENT	Bennington Meter Station	Bryan	Would be concurrent with MIDSHIP Project	Non-jurisdictional power line constructed to supply electricity.	Geology, Soils, Groundwater, Surface Water, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction), Noise (construction), Socioeconomics	About 588 feet of line heading north from the Bennington Meter Station.
OIL AND NATURAL GAS PRODUCTION						
PRES./FUT.	Jones Energy Inc., oil and gas production ¹	Canadian, Grady, McClain	Land acquired in 2016; well drilling schedule unknown.	Jones Energy has acquired 18,000 net acres from American Energy Partners. Drilling activity would occur in Canadian, Grady, and McClain Counties.	Geology, Soils, Groundwater, Surface Water, Wetlands, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction and operation), Noise (construction and operation), Socioeconomics	Located in the general project area; exact well locations unknown.
OIL AND NATURAL GAS TRANSPORT, PROCESSING AND STORAGE						
FUTURE	2018 Line V Replacement Project ^b	Oklahoma, Logan	Proposed – Prior Notice Application Filed April 30, 2018. Construction planned July – November 2018	Replacement of seven non-contiguous segments of 20- and 24-inch pipeline, totaling about 14.4 miles, in Oklahoma and Logan Counties. No aboveground facilities are proposed.	Geology, Soils, Groundwater, Surface Water, Wetlands, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction and operation), Noise (construction and operation), Socioeconomics	Nearest replacement segment is over 19 miles east of Chisholm Lateral MP CH0.0.
PRESENT	Blue Mountain Delivery Line Project ^c	Grady	Construction – Anticipated completion May 2018	Construction and operation of two segments of natural gas pipelines (4.4 miles of 20-inch-diameter pipeline and 5.2 miles of 12-inch-diameter pipeline) as well as a metering and pigging facility in Grady County, Oklahoma	Geology, Soils, Groundwater, Surface Water, Wetlands, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction and operation), Noise (construction and operation), Socioeconomics	Intersects the Mainline at milepost (MP) 42.9. Meter facility about 2.0 mile northeast of Mainline MP 42.9.

APPENDIX L (cont'd)						
Past, Present, and Reasonably Foreseeable Future Projects with Potential for Cumulative Impacts when Combined with the Midcontinent Supply Header Interstate Pipeline (MIDSHIP) Project						
Status	Project	County	Construction/ Operation Status	Description	Resources Affected	Location Relative to the MIDSHIP Project ^a
PRESENT	Blue Mountain Chisholm Trail Project ¹	Grady, Carter	Construction – Anticipated completion May 2018	Construction and operation of about 4.7 miles of 12-inch-diameter pipeline and a metering facility in Grady County, and installation of a skid-mounted compressor station (totaling about 4,145 horsepower) in Carter County	Geology, Soils, Groundwater, Surface Water, Wetlands, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction and operation), Noise (construction and operation), Socioeconomics	Metering facility located about 2 miles northeast of Mainline MP 43.0. Compressor station is about 3 miles southwest of Mainline MP 103.0.
PRESENT	Chisholm Trail Cryogenic Gas Plant ^{1,2}	Grady	Construction – Anticipated completion May 2018	Gas processing facility with a total capacity of 250 million standard cubic feet per day.	Geology, Soils, Groundwater, Surface Water, Wetlands, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction and operation), Noise (construction and operation), Socioeconomics	About 3.6 miles northeast of Mainline MP 39.0
PRESENT	Canal & STACK Expansion (CaSE) Project ²	Kingfisher, Canadian, Grady, Garvin, Stephens, Bryan	Construction	The CaSE Project will utilize existing and expansion facilities, as well as capacity on third-party pipelines, to provide 400,000 dekatherms of new takeaway capacity from the Canal, STACK, and SCOOP plays.	Visual Resources, Air (construction and operation), Noise (construction and operation), Socioeconomics	Receipt point at Okarche/Mark West with delivery at Bennington through existing pipeline systems.
PAST	Plains All American Pipeline, LP ³	Kingfisher, Canadian, Grady, Carter	Construction observed in 2016. Presumed operational.	Active pipeline construction observed by Midship Pipeline in 2016.	Land Use, Air (operation), Socioeconomics	Intersects Chisholm Lateral at MP CH0.2
PAST	Duncan-Longview Project ^{3,4}	Kingfisher, Canadian, Grady, Carter	2016 – Currently operational.	Plains All American Pipeline, LP pipeline construction project. The 226-mile-long, 16-inch-diameter pipeline transporting crude oil from Duncan, Oklahoma to a terminal in Longview, Texas.	Land Use, Air (operation), Socioeconomics	Exact project footprint unknown, but does not appear to intersect the MIDSHIP Project.

APPENDIX L (cont'd)

Past, Present, and Reasonably Foreseeable Future Projects with Potential for Cumulative Impacts when Combined with the Midcontinent Supply Header Interstate Pipeline (MIDSHIP) Project

Status	Project	County	Construction/ Operation Status	Description	Resources Affected	Location Relative to the MIDSHIP Project *
PAST	Compressor or Booster Stations ⁶	All counties	Prior to 2017 – Currently operational.	Compressor/booster stations associated with area pipelines, operated by a variety of companies. Estimated 5 acres for each site; the following number of stations are located within each county: Kingfisher – 40 Johnston – 2 Canadian – 22 Bryan – 1 Grady – 43 Surrounding counties Garvin – 23 (Able, Caddo, Stephens – 27 Custer, Blaine, Carter – 24 McClain) – 110	Groundwater, Surface Water, Wetlands, Vegetation, Wildlife, Land Use, Visual Resources, Air (operation), Noise (operation), Socioeconomics	Located within 50 kilometers of the MIDSHIP Project.
PAST	Wynnewood Refinery ^{5, 8}	Garvin	Currently operational.	Wynnewood Refining Co. LLC's refinery of gasoline, diesel fuel, military jet fuel, solvents, asphalt. Unspecified size. Located at 906 S. Powell Avenue, Wynnewood, Oklahoma.	Air (operation)	About 19.2 miles ENE of Mainline MP 100.0.
PAST	Wynnewood Products Terminal ^{5, 7}	Murray	Prior to 1985 – Currently operational.	Valero Partners Wynnewood LLC products terminal that transports refined products from the Valero Ardmore Refinery in Carter County, Oklahoma.	Air (operation)	About 18.6 miles NE of MP 101.7.
PAST	Valero Ardmore Refinery ^{4, 5, 8}	Carter	1913 – Currently operational.	The Valero Ardmore Refinery is located on 722 acres and has a total throughput capacity of approximately 90,000 barrels per day. Also has more than 2.4 million barrels of refined product storage.	Air (operation)	About 5.4 miles SW of MP 129.
PAST	Anadarko Plant ^{5, 9}	Caddo	May 2001 – Currently operational.	WFEC GenCo LLC's 90 megawatt power plant. Unspecified size, located at 701 NE 7th St. Anadarko, Oklahoma.	Air (operation)	About 20.0 miles SW of MP 41.6.
PAST	Able Gas Plant ^{5, 10}	Able	About 2007 – Currently operational.	TPL Arkoma Holdings LLC cryogenic processing plant.	Air (operation)	About 19.6 miles NE of MP 174.9.
PAST	Velma Gas Plant ^{5, 11}	Stephens	1948 – Currently operational.	Atlas Pipeline Midcontinent LLC 100 million cubic feet per day capacity natural gas processing plant.	Air (operation)	About 0.1 mile W of MP VED.0.
PAST	Maysville Gas Plant ^{5, 12}	Garvin	1948 – Currently operational.	ONEOK Field Services Company, LLC cryogenic natural gas liquids extraction plant.	Air (operation)	About 12.8 miles NE of MP 80.7.

APPENDIX L (cont'd)						
Past, Present, and Reasonably Foreseeable Future Projects with Potential for Cumulative Impacts when Combined with the Midcontinent Supply Header Interstate Pipeline (MIDSHIP) Project						
Status	Project	County	Construction/ Operation Status	Description	Resources Affected	Location Relative to the MIDSHIP Project ^a
PAST	Stephens Gas Plant ^{5, 13}	Stephens	Prior to 1974 – Currently operational.	ONEOK Field Services Company, LLC cryogenic natural gas processing plant.	Air (operation)	About 0.9 mile NW of MP VE0.0.
PAST	Elmore City Gas Plant ^{5, 14}	Garvin	Prior to 1974 – Currently operational.	OK Gas Processing, Inc. natural gas/liquids processing plant.	Air (operation)	About 3.2 miles NE of MP 97.2.
PAST	Wasson Station Tank Farm ^{5, 15}	Carter	1993 – Currently operational.	Nustar Logistics LP - Central West Region petroleum storage facility.	Air (operation)	About 9.7 miles S of MP 116.3
PAST	Binger Plant ^{5, 16}	Caddo	1976 – Currently operational.	Mustang Gas Products, LLC gas processing plant	Air (operation)	About 17.4 miles SW of MP 22.7.
PAST	Amber Gas Plant ^{5, 17}	Grady	Prior to 2014 – Currently operational.	Aka Energy Group cryogenic gas processing plant	Air (operation)	About 3.3 miles NE of MP 47.8.
PAST	E Durant Dehydration Plant ⁴	Bryan	Prior to 2017 – Currently operational.	Finley Resources, Inc. gas processing plant.	Air (operation)	About 8.4 miles S of MP 178.3.
PAST	Canal Gas Plant ^{5, 18}	Canadian	2011 – Currently operational.	EnLink Midstream Services LLC gas processing plant.	Air (operation)	About 0.5 mile E of MP 15.3.
PAST	Calumet Gas Processing Plant ³	Canadian	1968 – Currently operational.	Enable Products, LLC gas processing plant.	Air (operation)	About 2.2 miles NW of MP 5.9
PAST	Cox City Processing Plant ^{5, 19}	Grady	Prior to 1992 – Unknown termination.	Enable Products, LLC gas processing plant.	Air (operation)	About 4.9 miles SW of MP 71.6
PAST	South Canadian Processing Plant ^{5, 20}	Canadian	2011 – Currently operational.	Enable Products, LLC gas processing plant.	Air (operation) Noise (operation)	About 0.3 mile NW of MP 17.5.
PAST	Tucker Trust Dehydration Plant ⁵	Caddo	Prior to 2017 – Unknown termination.	Enable Midstream Partners LP Petroleum processing or storage. Unspecified size.	Air (operation)	About 23.9 miles W of MP 17.8.
PAST	Chilwood Gas Plant ^{5, 21}	Grady	1948 – Currently operational.	DCP Midstream LP gas processing plant.	Air (operation)	About 5.1 miles W of MP 68.2

APPENDIX L (cont'd)

Past, Present, and Reasonably Foreseeable Future Projects with Potential for Cumulative Impacts when Combined with the Midcontinent Supply Header Interstate Pipeline (MIDSHIP) Project

Project Status	Project	County	Construction/ Operation Status	Description	Resources Affected	Location Relative to the MIDSHIP Project *
PAST	Fox Gas Plant ^{5, 22}	Carter	1940's – Currently operational.	DCP Midstream LP cryogenic gas processing plant.	Air (operation)	About 8.3 miles SW of MP 109.3.
PAST	Kingfisher Natural Gas Processing Plant ^{5, 23}	Kingfisher	Prior to 1978 – Currently operational.	DCP Midstream LP Gas processing. Unspecified size.	Air (operation)	About 1.2 miles N of MP CH0.0.
PAST	Mustang Gas Plant ⁵	Grady	Prior to 2017 – Currently operational.	DCP Midstream LP petroleum processing/storage facility.	Air (operation)	About 10.2 miles NE of MP 38.9.
PAST	Okarche Plant ^{3, 24}	Kingfisher	Prior to 1981 – Currently operational.	DCP Midstream LP gas processing facility.	Air (operation) Noise (operation)	Less than 0.1 mile NW of MP CH20.1.
PAST	Sholem Gas Plant ^{5, 25}	Stephens	Prior to 1982 – Unknown termination.	DCP Midstream LP gas processing facility.	Air (operation) Noise (operation)	About 0.2 mile NE of MP VE8.5.
PAST	Healdton Gas Plant ^{5, 26}	Carter	Prior to 1970 – Currently operational.	Citation Oil and Gas Corporation LLC gas processing facility.	Air (operation)	About 12.5 miles SW of MP 111.5.
PAST	Binger Nitrogen Gas Plant ⁵	Caddo	Prior to 2017 – Currently operational.	Binger OPR LLC petroleum processing /storage facility.	Air (operation)	About 16.2 miles W of MP 29.3.
PRESENT	Vesio-Cana 5 Tank Battery ¹	Canadian	2017	Cimarex tank battery (temporary crude oil storage, testing, and measuring device). Identified during discussions with landowner while completing a land purchase agreement review.	Groundwater, Surface Water, Wetlands, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction and operation), Noise (construction), Socioeconomics	Less than 0.1 mile W of MP 9.6.
ELECTRIC GENERATION AND TRANSMISSION PROJECTS						
FUTURE	Plains and Eastern Clean Line ^{5, 27}	Blaine, Kingfisher, Logan	Currently in planning stages; construction schedule unknown.	Clean Line Energy Partners' 700-mile direct current transmission that will deliver wind energy from the Oklahoma Panhandle region to utilities and customers in the Mid-South and southeastern United States.	Socioeconomics	Parallels the Chisholm Lateral approximately 22 miles N of the lateral.
PRESENT	Stonewall – Wapanucka 138 kV ^{3, 28}	Johnston, Coal, Pontotoc	2015 – Currently operational.	American Electric Power Company, Inc.'s new 6.4-mile, 138 kilovolt electric transmission line from Stonewall to Wapanucka, Oklahoma.	Socioeconomics	About 14 miles NE of MP 162.5.

APPENDIX L (cont'd)

Past, Present, and Reasonably Foreseeable Future Projects with Potential for Cumulative Impacts when Combined with the Midcontinent Supply Header Interstate Pipeline (MIDSHIP) Project

Status	Project	County	Construction/ Operation Status	Description	Resources Affected	Location Relative to the MIDSHIP Project ^a
PAST	Darlington Road – Roman Nose ^{3, 28}	Blaine, Canadian	June 2017 – Currently operational.	Public Service Company of Oklahoma, an AEP Oklahoma Transmission Company, constructed approximately 13 miles of new 138 kilovolt electric transmission line from a substation near Calumet, OK to a interconnect with an Oklahoma Gas & Electric line near Geary, Oklahoma.	Soils, Groundwater, Surface Water, Wetlands, Vegetation, Wildlife, Land Use, Visual Resources, Socioeconomics	Collocated with the mainline from MP 9.9 to 10.4 and then extends eastwards.
PAST	Kingfisher Wind Project ³⁰	Kingfisher, Canadian	March 2016 – Currently operational.	The Kingfisher Wind Project is an 11,000-acre wind farm comprising 149 turbines in Kingfisher and Canadian Counties. Turbines are clustered in Kingfisher County on the northern side of the Kingfisher/ Canadian County line.	Groundwater, Surface Water, Wetlands, Vegetation, Wildlife, Land Use, Visual Resources, Noise (operation), Socioeconomics	The Chisholm Lateral intersects the wind farm; turbines located north and south of the lateral (MP CH0.0 to CH6.2). A second cluster of wind turbines about 3.0 miles south of MP's CH6.2 to CH11.4.
TRANSPORTATION AND COMMERCIAL/RESIDENTIAL DEVELOPMENT PROJECTS						
FUTURE	Kilpatrick Extension ³¹	Canadian, Oklahoma	Still in planning stages; construction schedule unknown.	Oklahoma Turnpike Authority's road construction project. The project is an approximately 7-mile extension of the Kilpatrick Turnpike in Oklahoma City that will occur between Interstate-40 and State Highway 152/Airport Road.	Air (operation), Socioeconomics	About 17.9 miles E of MP 27.3.
PRESENT	State Highway 53 Improvement Project ³²	Cartier	Utility relocations planned for 2018; construction scheduled to begin in 2020.	Oklahoma Department of Transportation highway improvement project to improve sight distance and the addition of shoulders along approximately 5.6 miles of State Highway 53. The project will permanently impact approximately 27 acres of land.	Groundwater, Surface Water, Wetlands, Vegetation, Wildlife, Land Use, Visual Resources, Air (construction and operation), Noise (construction), Socioeconomics	About 0.2 to 0.5 miles N of MP 119.0 to MP 124.5.
PAST	Commercial Metals Company Steel Mill Project ^{33, 34}	Bryan	2017 – Currently operational.	Commercial Metals Company constructed a new channel around a steel mill in Durant, Oklahoma, which involved placing permanent fill into an unnamed tributary to Kanola Creek.	Groundwater, Surface Water, Wetlands, Vegetation, Wildlife, Socioeconomics	About 8.8 miles SSW of MP 179.0.

APPENDIX L (cont'd)						
Past, Present, and Reasonably Foreseeable Future Projects with Potential for Cumulative Impacts when Combined with the Midcontinent Supply Header Interstate Pipeline (MIDSHIP) Project						
Status	Project	County	Construction/ Operation Status	Description	Resources Affected	Location Relative to the MIDSHIP Project ^a
a	Mileposts on the Chisholm Lateral are differentiated from the Mainline with a "CH" in front of the milepost number. Mileposts on the Velma Lateral are differentiated from the Mainline with a "VE" in front of the milepost number.					
b	Federal Energy Regulatory Commission Docket No. CP18-384-000.					
c	Federal Energy Regulatory Commission Docket No. CP18-14-000.					
d	Federal Energy Regulatory Commission Docket No. CP18-17-000.					
e	Construction on this project was observed in the field.					
f	Identified during discussions with landowner while completing a land purchase agreement review.					
Sources:						
1	Oil and Gas Journal. 2016. Jones Energy completes deal to enter STACK, SCOOP. Available online at http://www.oil.com/articles/2016/09/jones-energy-completes-deal-to-enter-stack-scoop.html . Accessed June 2017.					
2	Projects. 2017. Enable Gas Transmission Cana & STACK Expansion (CaSE). Available online at http://projects.enablemktstream.com/project/enab-gas-transmission-cana-stack-expansion-case/ . Accessed January 2018.					
3	Rexdag, A Hart Energy Company. 2017. Global Energy Mapping Data. Available online at https://rexdag.com/gis . Accessed June 2017.					
4	Longview News-Journal. 2015. Longview Firm Developing Plan for \$100M Pipeline to Shreveport. Available online at https://www.news-journal.com/news/2015/mar/24/longview-firm-developing-plan-for-100m-pipeline-to/ . Accessed July 2017.					
5	Oklahoma Department of Environmental Quality. 2017. Open Data Portal. Available online at http://ocdata.deq.opendata.arcgis.com/ . Accessed July 2017.					
6	CVR Refining. 2017. Refining Operations. Available online at http://www.cvrrefining.com/RefiningOperations/ . Accessed June 2017.					
7	Valero Energy Partners LP. 2017. Operations. Available online at https://www.valeroenergypartners.com/about/operations . Accessed September 2017.					
8	Valero Marketing and Supply Company. 2017. Ardmore Refinery. Available online at https://www.valero.com/en-us/Pages/Ardmore.aspx . Accessed September 2017.					
9	Western Farmers Electric Cooperative. 2014. 2014 Annual Report. Available online at http://www.wfec.com/sites/default/files/2014%20WREC%20Annual%20Report%20WYS.pdf . Accessed June 2017.					
10	Targa Resources. 2016. SouthOK Gathering System. Available online at http://www.targarresources.com/operations/gathering-processing/field-gathering-processing/southok-gas-gathering-processing/ . Accessed July 2017.					
11	Oklahoma Department of Environmental Quality Air Quality Division. 2011. Draft evaluation of Permit No. 2011-101-TVR. 2011. Available online at http://www.deq.state.ok.us/apps/hondiv/permitspublic/storedpermits/2030.pdf . Accessed July 2017.					
12	Oklahoma Department of Environmental Quality Air Quality Division. 2013. Draft Evaluation of Permit Application No. 2011-227-TVR2, Mayeville Gas Plant. Available online at http://www.deq.state.ok.us/apps/hondiv/permitspublic/storedpermits/2657.pdf . Accessed July 2017.					
13	U.S. Environmental Protection Agency. 2015. FRS Facility Detail Report ONEOK Field SVC/Stephens Gas Plant. EPA Registry ID: 110007386989. Available online at https://aspub.epa.gov/enviro/nl_query_detail.cfm?program_facility_id=110007386989 . Accessed September 2017.					
14	Oklahoma Department of Environmental Quality Air Quality Division. 2009. Draft Evaluation of Permit Application No. 2009-354-TVR2 Elmore City Gas Plant. Available online at http://www.deq.state.ok.us/apps/hondiv/permitspublic/storedpermits/1646.pdf . Accessed July 2017.					
15	Environmental Protection Agency. 2017. FRS Facility Detail Report Nustar Logistics LP – Central West Region Wesson Station Tank Farm. Available online at https://aspub.epa.gov/enviro/nl_query_detail.cfm?program_facility_id=110007386765 . Accessed July 2017.					
16	Oklahoma Department of Environmental Quality Air Quality Division. 2005. Draft Evaluation of Permit Application No. 2003-175-TVR Blinger Gas Plant. Available online at www.deq.state.ok.us/apps/hondiv/permitspublic/storedpermits/487.doc . Accessed July 2017.					
17	Aka Energy Group, LLC. 2017. Company Profile History. Available online at http://www.akaenergy.com/companyprofile/History.aspx . Accessed July 2017.					

APPENDIX L (cont'd)					
Past, Present, and Reasonably Foreseeable Future Projects with Potential for Cumulative Impacts when Combined with the Midcontinent Supply Header Interstate Pipeline (MIDSHIP) Project					
Project	County	Construction/ Operation Status	Description	Resources Affected	Location Relative to the MIDSHIP Project*
Oklahoma Department of Environmental Quality, Air Quality Division. 2010. Draft Evaluation of Permit Application No. 2009-177-C Cana Gas Plant. Available online at http://www.deq.state.ok.us/apps/nondiv/permitspublic/storedpermits/1677.pdf . Accessed July 2017.					Available online at
Oklahoma Department of Environmental Quality, Air Quality Division. 2009. Draft Evaluation of Permit Application No. 2009-198-TV Cox City Processing Plant. Available online at http://www.deq.state.ok.us/apps/nondiv/permitspublic/storedpermits/1518.pdf . Accessed July 2017.					
NewsOK. 2011. Enogex is Adding Pipeline Assets in Northwest Oklahoma. Available online at http://newsok.com/article/3609071 . Accessed July 2017.					
Oklahoma Department of Environmental Quality, Air Quality Division. 2012. Chitwood Gas Plant. Available online at http://www.deq.state.ok.us/apps/nondiv/permitspublic/storedpermits/2260.pdf . Accessed July 2017.					
Oklahoma Department of Environmental Quality, Air Quality Division. 2014. Draft Evaluation of Permit Application No. 2013-0130-TVR2 Fox Gas Plant. Available online at http://www.deq.state.ok.us/apps/nondiv/permitspublic/storedpermits/2709.pdf . Accessed July 2017.					
Oklahoma Department of Environmental Quality, Air Quality Division. 2014. Draft Evaluation of Permit Application No. 2007-240-C (M-4) Kingfisher Natural Gas Processing Plant. Available online at http://www.deq.state.ok.us/apps/nondiv/permitspublic/storedpermits/2705.pdf . Accessed July 2017.					
Oklahoma Department of Environmental Quality, Air Quality Division. 2014. Draft Evaluation of Permit Application No. 2013-1557-TVR2. Available online at http://www.deq.state.ok.us/apps/nondiv/permitspublic/storedpermits/2695.pdf . Accessed July 2017.					
Oklahoma Department of Environmental Quality, Air Quality Division. 2013. Draft Evaluation of Permit Application No. 2011-064-TVR2 Shokern Gas Plant. Available online at http://www.deq.state.ok.us/apps/nondiv/permitspublic/storedpermits/2503.pdf . Accessed July 2017.					
Oklahoma Department of Environmental Quality, Air Quality Division. 2012. Draft Evaluation of Permit Application No. 2012-679-TV Healdton Gas Plant. Available online at http://www.deq.state.ok.us/apps/nondiv/permitspublic/storedpermits/2379.pdf . Accessed July 2017.					
Clean Line Partners. 2017. Welcome to the Plains & Eastern Clean Line. Available online at http://www.plainsandeasterncleanline.com/site/home . Accessed July 2017.					
Southwest Power Pool. 2015. Q2 2015 Quarterly Project Tracking Report – Appendix I. Available online at https://www.spp.org/spp-documents-filings/?id=18641 .					
Public Service Company of Oklahoma, an AEP Company. 2018. Darrington Road – Roman Nose. Available online at http://aeptransmission.com/oklahoma/DarringtonRoad-RomanNose/index.php . Accessed January 2018.					
OK Energy Today. 2016. Neighbors' Nuisance Suit Dismissed against Kingfisher Wind Farm. Available online at http://okenergytoday.com/2016/10/neighbors-nuisance-suit-dismissed-kingfisher-wind-farm/ . Accessed June 2017.					
Oklahoma Turnpike Authority. 2016. Southwest Kilpatrick Extension. Available online at http://www.drivingforwardok.com/sw-kilpatrick-extension . Accessed June 2017.					
Oklahoma Department of Transportation. 2015. The Oklahoma Department of Transportation Public Meeting for SH-53 in Carter County, OK. Available online at http://www.okladot.state.ok.us/meetings/a2015151208/brochure.pdf . Accessed September 2017.					
U.S. Army Corps of Engineers, Tulsa District, and Oklahoma Department of Environmental Quality. Joint Public Notice No. SWT-2015-293. Available online at http://www.swt.usace.army.mil/Missions/Regulatory/Public-Notices/Article/599826/swt-2015-293/ . Accessed September 2017.					
Commercial Metals Company. North America. Available online at https://www.cmc.com/en/global/locations/north-america . Accessed January 2018.					

20180621-3006 FERC PDF (Unofficial) 06/21/2018

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M

REFERENCES

20180621-3006 FERC PDF (Unofficial) 06/21/2018

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M REFERENCES

- Allen, Williford and Seale, Inc. 2001. Natural Gas Pipeline Impact Study. Prepared for the Interstate Natural Gas Association of America Foundation, Inc.
- Allen, Williford and Seale, Inc. 2014. Pipeline Impact Study: Study of a Williams Natural Gas Pipeline on Residential Real Estate Saddle Ride Subdivision, Dallas Township, Luzerne County, Pennsylvania. Prepared for Williams Pipeline Company. December 2014.
- American Hospital Directory. 2016. Hospital Statistics by State. Available online at https://www.ahd.com/state_statistics.html. Accessed December 2016.
- American National Standards Institute. 1993. ANSI S12.9-1993/Part 3. Quantities and Procedures for Description and Measurement of Environmental Sound. Part 3: Short-Term Measurements with an Observer Present.
- American Oil and Gas Historical Society. 2018. First Oklahoma Oil Well. Available online at <https://aoghs.org/petroleum-pioneers/first-oklahoma-oil-well/>. Accessed January 2018.
- Anderson, R.S. 1982. On the Decreasing Abundance of *Nicrophorus americanus* Olivier (Coleoptera: Silphidae) in Eastern North America. *The Coleopterists Bulletin* 36: 362- 365.
- Arkansas Geological Survey. 2017. Fossils of Arkansas Fact Sheet. Available online at <http://www.geology.ar.gov/geology/fossils.htm>. Accessed July 2017.
- Ball, M.M, M.E. Henry, and S.E. Frezon. 1988. Petroleum Geology of the Anadarko Basin Region, Province 115, Kansas, Oklahoma, and Texas. U.S. Geological Survey Open-File Report 88-450W. Available online at <https://pubs.usgs.gov/of/1988/0450w/report.pdf>. Accessed July 2017.
- Belden, Mark. 2000. Hydrogeologic Report of the El Reno, Fairview, Isabella and Loyal Minor Groundwater Basins in Central Oklahoma. Available online at http://www.owrb.ok.gov/studies/reports/reports_pdf/tr2000_1%20el%20reno%20fairview%20minor%20basins.pdf. Accessed July 2017.
- Bolt, Beranek and Newman, Inc. 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances. Prepared for the U.S. Environmental Protection Agency. Washington, DC. December 31, 1971.
- Bruckse Bury, M., P. Clark, E. Hamilton, P. Matchen, J. Jacobson, A. Knapp, and M. Archambeault. 2017a. Midship Project: A Phase I Cultural Resources Survey in Bryan, Canadian, Carter, Garvin, Grady, Johnston, Kingfisher, and Stephens Counties, Oklahoma, Volume I. Prepared by TRC Environmental Corporation for Midship Pipeline Company, LLC.
- Bruckse Bury, M., P. Clark, E. Hamilton, P. Matchen, J. Jacobson, A. Knapp, and M. Archambeault. 2017b. Midship Project: A Phase I Cultural Resources Survey of Velma Lateral and Other Survey Areas in Bryan, Canadian, Carter, Garvin, Grady, Johnston, Kingfisher, and Stephens Counties, Oklahoma, Volume II. Prepared by TRC Environmental Corporation for Midship Pipeline Company, LLC.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- Bruckse Bury, M., P. Clark, E. Hamilton, P. Matchen, J. Jacobson, A. Knapp, and M. Archambeault. 2017c. Midship Project: A Phase I Cultural Resources Survey in Bryan, Canadian, Carter, Garvin, Grady, Johnston, Kingfisher, and Stephens Counties, Oklahoma, Addendum Report to Volumes I and II. Prepared by TRC Environmental Corporation for Midship Pipeline Company, LLC.
- Bruckse Bury, M., P. Clark, E. Hamilton, P. Matchen, J. Jacobson, and A. Knapp. 2018. Midship Project: A Phase I Cultural Resources Survey in Bryan, Canadian, Carter, Garvin, Grady, Johnston, Kingfisher, and Stephens Counties, Oklahoma, Addendum Report II to Volumes I and II. Prepared by TRC Environmental Corporation for Midship Pipeline Company, LLC.
- Bureau of Labor Statistics. 2007. Census of Fatal Occupational Injuries. Available online at <https://www.bls.gov/iif/oshcfoi1.htm>. Accessed January 2018.
- Bureau of Labor Statistics. 2017. CPI Inflation Calculator. Available online at http://www.bls.gov/data/inflation_calculator.htm. Accessed June 2017.
- Canadian Wildlife Service and U.S. Fish and Wildlife Service. 2007. International Recovery Plan for the Whooping Crane (*Grus Americana*) (3rd rev.). Ottawa: Recovery of Nationally Endangered Wildlife (RENEW) and U.S. Fish and Wildlife Service, Albuquerque, New Mexico. Available online at <https://www.fws.gov/uploadedFiles/WHCR%20RP%20Final%202017-21-2006.pdf>. Accessed August 2017.
- Chickasaw Country. 2017. Nature and Outdoors, Blue River. Available online at <http://www.chickasawcountry.com/outdoors/blue-river>. Accessed August 2017.
- Christenson, Scott, N.I. Osborn, C.R. Neel, J.R. Faith, C.D. Blome, J. Puckette, and M.P. Pantea. 2011. Hydrogeology and Simulation of Groundwater Flow in the Arbuckle-Simpson Aquifer, South-Central Oklahoma. U.S. Geological Survey Scientific Investigations Report 2011-5029. Available online at <https://pubs.usgs.gov/sir/2011/5029/SIR2011-5029.pdf>. Accessed July 2017.
- Cornell Lab of Ornithology. 2017. All About Birds. Available online at <https://www.allaboutbirds.org/>. Accessed August 2017.
- Council on Environmental Quality. 1997a. Environmental Justice: Guidance under the National Environmental Policy Act. Available online at http://www.epa.gov/compliance/ej/resources/policy/ej_guidance_nepa_ceq1297.pdf. Accessed August 2014.
- Counsel on Environmental Quality. 1997b. Considering Cumulative Effects Under the National Environmental Policy Act. Available online at <https://ceq.doe.gov/publications/-cumulative-effects.html>. Accessed July 2017.
- Cowardin, L.M., V. Carter, F. Golet, and E. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. FWS/OBS-79/31. U.S. Department of the Interior, Fish and Wildlife Services Program. Washington, DC.
- Diskin, B.A., J.P. Friedman, S.C. Peppas, and S.R. Peppas. 2011. The Effect of Natural Gas Pipelines on Residential Value. Available online at http://www.irwaonline.org/eweb/upload/web_jan_NaturalGas.pdf. Accessed January 2017.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- Ellsworth, W.L. 2013. Injection-induced earthquakes. *Science*, 341:6142, 1225942, doi:10.1126/science.1225942.
- Environmental Laboratory. 1987. Corps of Engineers Wetland Delineation Manual, Technical Report Y-87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi.
- Farm Service Agency. 2017a. Conservation Programs. U.S. Department of Agriculture. Available online at <https://www.fsa.usda.gov/programs-and-services/conservation-programs/index>. Accessed July 2017.
- Farm Service Agency. 2017b. Conservation Reserve Program. U.S. Department of Agriculture. Available online at <https://www.fsa.usda.gov/programs-and-services/conservation-programs/conservationreserve-program/index>. Accessed July 2017.
- Farm Service Agency. 2017c. Conservation Reserve Enhancement Program. U.S. Department of Agriculture. Available online at <https://www.fsa.usda.gov/programs-and-services/conservation-programs/conservation-reserve-enhancement/index>. Accessed July 2017.
- Federal Aviation Administration, Bureau of Transportation Statistics. 2013. National Transportation Atlas Database. Available online at https://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national_transportation_atlas_database/index.html. Accessed January 2017.
- Federal Emergency Management Agency. 2017. National Flood Hazard Layer. Available online at <https://fema.maps.arcgis.com/home/item.html?id=cbe088e7c8704464aa0fc34eb99e7f30>. Accessed August 2017.
- Federal Energy Regulatory Commission. 2011. Environmental Assessment for Sabine Pass Liquefaction, LLC and Sabine Pass LNG, L.P.'s Sabine Pass Liquefaction Project. Docket No. CP11-72-000.
- Federal Energy Regulatory Commission. 2012. Environmental Assessment for Millennium Pipeline Co, LLC's Minisink Compressor Project. Docket No. CP11-515-000.
- Federal Energy Regulatory Commission. 2014. Final Environmental Impact Statement – Vol 1. FERC EIS 0249F. Constitution Pipeline and Wright Interconnect Projects. Docket Nos. CP13-499-000; CP13-502-000; PF12-9-00.
- Federal Register. 1994. Changes in Hydric Soils of the United States. Washington, DC, (current Hydric Soil definition) Vol. 59, No. 133 (July 13).
- Fenneman, N.M. 1923. Physiographic Province and Sections in Western Oklahoma and Adjacent Parts of Texas: in Marius R. Campbell, ed., Contributions to the Geography of the United States. U.S. Geological Survey. Available online at <https://pubs.usgs.gov/bul/0730d/report.pdf>. Accessed July 2017.
- Fenneman, N.M., and D.W. Johnson. 1946. Physiographic Divisions of the Conterminous United States. U.S. Geological Survey. Reston, Virginia.
- FireDepartment.net. 2016. Oklahoma Fire Departments. Available online at <http://www.firedepartment.net/directory/oklahoma>. Accessed December 2016.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- Fruits, E. (ECONorthwest). 2008. Natural Gas Pipelines and Residential Property Values: Evidence from Clackamas and Washington Counties. Available online at http://www.academia.edu/195355/Natural_Gas_Pipelines_and_Residential_Property_Values_Evidence_from_Clackamas_and_Washington_Counties. Accessed January 2017.
- Fuller, R. 2004. Texoma Washita Arm Wildlife Management Area: Outdoor Oklahoma Magazine. Available online at https://www.wildlifedepartment.com/facts_maps/wma/texomawma.pdf. Accessed July 2017.
- Gnarus Advisors LLC. 2012. Pipelines and Property Values: An Eclectic Review of the Literature. Co-authored by L. Wilde, C. Loos, and J. Williamson. February 15, 2012. Available online at http://pstrust.org/docs/Gnarus_Pipelines_Property_Values.pdf. Accessed January 2017.
- Google Earth. 2016. Search for hotels, RV Parks, and Campgrounds. Accessed December 2016.
- Google Earth. 2017. Search for hotels, RV Parks, and Campgrounds. Accessed February 2017.
- Hansen, J.L., E.D. Benson, and D.A. Hagen. 2006. Environmental Hazards and Residential Property Values: Evidence from a Major Pipeline Event. November 2006.
- Hart, Donald L. and R.E. Davies. 1981. Geohydrology of the Antlers Aquifer. Oklahoma Geological Survey Circular 81. Available online at <http://www.ogs.ou.edu/pubsscanned/Circulars/circular81mm.pdf>. Accessed July 2017.
- Hotels.com. 2016. Hotel Search in Oklahoma Towns. Available online at www.hotels.com. Accessed December 2016.
- Hotels.com. 2017. Hotel Search in Oklahoma Towns. Available online at www.hotels.com. Accessed March 2017.
- Integra Realty Resources. 2016. Pipeline Impact to Property Value and Property Insurability. Available online at <http://www.ingaa.org/File.aspx?id=27480&v=cac46a26>. Accessed January 2017.
- International Right of Way Online. 2011. The Effects of Natural Gas Pipelines on Residential Value. Available online at http://www.irwaonline.org/eweb/upload/web_jan_NaturalGas.pdf. Accessed July 2017.
- Interstate Natural Gas Association of America Foundation. 2016. Pipeline Impact to Property Value and Property Insurability. Prepared by Integra Realty Resources. February 2016. Available online at <http://www.ingaa.org/PropertyValues.aspx>. Accessed July 2017.
- Johnson, K.S. 1988. Geologic Evolution of the Anadarko Basin: *in* Kenneth S. Johnson, ed., Anadarko Basin Symposium. Oklahoma Geological Survey Circular 90. Available online at <http://www.ogs.ou.edu/pubsscanned/Circulars/Circular90.pdf>. Accessed July 2017.
- Johnson, K.S. 2008. Mineral Deposits and Resources of Oklahoma (Exclusive of oil and gas), Educational Publication 9:2008. Oklahoma Geological Survey, University of Oklahoma. Available online at http://www.ogs.ou.edu/pubsscanned/EP9p10_11minoilgas.pdf. Accessed July 2017.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- Johnson, R., D. Bernhardt, N. Nelson, and H. Calley. 1973. *Assessment of Potential Radiological Health Effects from Radon in Natural Gas*. Prepared for the U.S. Environmental Protection Agency, Office of Radiation Programs as EPA-520/1-83-004. Washington, DC.
- Kansas Geological Survey. 1996. Anadarko Basin—Province Summary. Kansas Geological Survey, Digital Petroleum Atlas. Available online at <http://www.ksu.edu/DPA/frontEnd/Anadarko/provSum.html>. Accessed July 2017.
- Kaufman, K. 1996. Lives of North American Birds. Kaufman Field Guides, Oak Harbor, Ohio. Available online at <http://www.audubon.org/bird-guide>. Accessed August 2017.
- Kochanek, K.D., S.L. Murphy, J.Q. Xu, B. Tejada-Vera. 2017. Deaths: Final Data for 2014. National Vital Statistics Reports; Vol. 65 No. 4. Hyattsville, Maryland: National Center for Health Statistics. Available online at https://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65_04.pdf. Accessed June 2017.
- Langenbruch, C. and M.D. Zoback. 2016. How Will Induced Seismicity in Oklahoma Respond to Decreased Saltwater Injection Rates? Scientific Advances, 2:11, e1601542, doi:10.1126/sciadv.1601542.
- LASR.NET. 2017. LASR.NET, Leisure and Sport. Lake Texoma WMA Hunting. Available online at https://www.lasr.net/travel/lake.php?Lake+Texoma+WMA+Hunting&TravelTo=TX06lk012&V=A=Y&Attraction_ID=TX06lk012a006. Accessed July 2017.
- Marsh, S. and A. Holland. 2016. Comprehensive Fault Database and Interpretive Fault Map of Oklahoma. Oklahoma Geological Survey Open-File Report OF2-2016. Available online at <http://ogs.ou.edu/docs/openfile/OF2-2016.pdf>. Accessed July 2017.
- Martinez, D., A. Barstow, and K. Stubbs. 2017. Telephone conversation on October 5, 2017, between J. Rieland and T. Lyons (Environmental Resources Management); J. Wacholder (Federal Energy Regulatory Commission); and D. Martinez, A. Barstow, and K. Stubbs (U.S. Fish and Wildlife Service).
- Mercy Hospital Healdton. 2016. Mercy Hospital Healdton Quick Facts. Available online at <https://www.mercy.net/newsroom-mercy-hospital-healdton-quick-facts>. Accessed December 2016.
- Mercy Hospital Kingfisher. 2016. Mercy Hospital Kingfisher. Available online at <https://www.mercy.net/practice/mercy-hospital-kingfisher>. Accessed December 2016.
- Mercy Hospital Tishomingo. 2016. Mercy Hospital Tishomingo. Available online at <https://www.mercy.net/practice/mercy-hospital-tishomingo>. Accessed December 2016.
- Morton, Robert B. 1992. Simulation of Ground-water Flow in the Antlers Aquifer in Southeastern Oklahoma and Northeastern Texas. Available online at <https://pubs.usgs.gov/wri/1988/4208/report.pdf>. Accessed July 2017.
- National Center for Education Statistics. 2016. Public School Survey. Available online at <http://nces.ed.gov/ipeds/data/ipedssearch/>. Accessed December 2016.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- National Historic Route 66 Federation. 2017. The History of Route 66. Available online at <http://national66.org/history-of-route-66/>. Accessed July 2017.
- National Park Service. 2017a. Nationwide Rivers Inventory, Authorizations. Available online at <https://www.nps.gov/ncrc/programs/rtca/nri/auth.html>. Accessed July 2017.
- National Park Service. 2017b. Nationwide Rivers Inventory. Oklahoma Segments. Available online at <https://www.nps.gov/ncrc/programs/rtca/nri/states/ok.html>. Accessed July 2017.
- National Park Service. 2017c. National Center for Recreation & Conservation, Nationwide Rivers Inventory, Oklahoma Segments. U.S. Department of the Interior, National Park Service. Available online at <https://www.nps.gov/ncrc/programs/rtca/nri/states/ok.html>. Accessed July 2017.
- National Weather Service. 2017. Weather Fatalities 2016. Available online at https://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65_04.pdf. Accessed June 2017.
- Natural Resources Conservation Service. 2017a. Highly Erodible Land Definitions. Available online at https://www.nrcs.usda.gov/wps/portal/nrcs/detail/pr/soils/?cid=nrcs141p2_037282. Accessed June 2017.
- Natural Resources Conservation Service. 2017b. Easements. U.S. Department of Agriculture. Available online at <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements>. Accessed July 2017.
- North American Bird Conservation Initiative. 2017. Bird Conservation Regions Map. Available online at <http://nabci-us.org/resources/bird-conservation-regions-map/>. Accessed May 2017.
- Oklahoma Association of Electric Cooperatives. 2017. Oklahoma Association of Electric Cooperatives, Cooperative Maps. Available online at <https://www.oaec.coop/map/>. Accessed December 2017.
- Oklahoma Conservation Commission. 2017. Oklahoma Conservation Reserve Enhancement Program. Available online at https://www.ok.gov/conservation/Agency_Divisions/Water_Quality_Division/WQ_CREP/. Accessed July 2017.
- Oklahoma Corporation Commission. 2017a. Well Browse Database. Available online at <https://www.occeweb.com/Orawebapps/OCCORaWebAppsone.html>. Accessed September 2017.
- Oklahoma Corporation Commission. 2017b. Pipeline Safety. Available online at <http://www.occeweb.com/tr/PLSHome.htm>. Accessed June 2017.
- Oklahoma Department of Agriculture Food and Forestry. 2017. Organic Producers List. Available online at <http://www.ag.ok.gov/food/organic.htm>. Accessed July 2017.
- Oklahoma Department of Environmental Quality. 2015. Integrated Water Quality Assessment - 2014 303(d) List Approved. Available online at http://www.deq.state.ok.us/wqdnew/305b_303d/. Accessed August 2017.
- Oklahoma Department of Environmental Quality. 2017a. GIS Data: Land Protection. Available online at http://gisdata.deq.opendata.arcgis.com/datasets?group_ids=27fb0a2c11794bb7b34b6e3119eec02d. Accessed June 2017.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- Oklahoma Department of Environmental Quality. 2017b. Data Viewer. Available online at <http://gis.deq.ok.gov/maps/>. Accessed July 2017.
- Oklahoma Department of Environmental Quality. 2017c. Guidance; General Permitting for Oil and Gas Facilities (January 30, 2017). Available online at <http://www.occeweb.com/og/D%20EQ%20Guidance%20for%20OG%20Sources.pdf>. Accessed September 2017.
- Oklahoma Department of Environmental Quality. 2017d. General Permit OKR10 for Storm Water Discharges from Construction Activities within the State of Oklahoma. Available online at http://www.deq.state.ok.us/WQDnew/stormwater/OKR10Permit_2012_final%20Review_August_Updated.pdf. Accessed September 2017.
- Oklahoma Department of Environmental Quality. 2017e. 2011 Oil & Gas Area Emissions. Available online at <http://www.deq.state.ok.us/aqdnew/emissions/OilandGasAreaEmissions/index.htm>. Accessed October 2017.
- Oklahoma Department of Transportation. 2015a. Maps AADT – Annual Average Daily Traffic Current. Available online at <http://www.odot.org/maps/aadt/index.htm>. Accessed May 2017.
- Oklahoma Department of Transportation. 2015b. Oklahoma Long Range Transportation Plan 2015-2040. Available online at http://www.okladot.state.ok.us/p-rdiv/lrp_2015_2040/2040_LRTP_Full_Document.pdf. Accessed January 2017.
- Oklahoma Department of Transportation. 2017. Planning & Research Division, Route 66 – Background. Available online at <http://www.okladot.state.ok.us/memorial/route66/route66background.htm>. Accessed July 2017.
- Oklahoma Department of Wildlife Conservation. 2011. Eagles in Oklahoma. Available online at <https://www.wildlifedepartment.com/wildlifemgmt/eaglesinok.htm>. Accessed August 2017.
- Oklahoma Department of Wildlife Conservation. 2013. Public comments of November 20, 2013. ODWC. Oklahoma City, OK.
- Oklahoma Department of Wildlife Conservation. 2016a. Species Spotlight. Available online at <http://www.wildlifedepartment.com/wildlifemgmt/species.htm>. Accessed December 2016.
- Oklahoma Department of Wildlife Conservation. 2016b. Arkansas River Shiner. Available online at <https://www.wildlifedepartment.com/wildlife/nongamespecies/arkansas-river-shiner>. Accessed August 2017.
- Oklahoma Department of Wildlife Conservation. 2016c. Arkansas River Shiner (*Notropis girardi*). Available online at <https://www.wildlifedepartment.com/wildlifemgmt/endangered/river-shiner.htm>. Accessed August 2017.
- Oklahoma Department of Wildlife Conservation. 2017a. What to Hunt. Available online at <https://www.wildlifedepartment.com/hunting/what-to-hunt>. Accessed August 2017.
- Oklahoma Department of Wildlife Conservation. 2017b. Texoma Washita Arm. Available online at <https://www.wildlifedepartment.com/wildlife-management-areas/texoma-washita-arm>. Accessed August 2017.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- Oklahoma Department of Wildlife Conservation. 2017c. Waterfowl. Available online at <http://www.wildlifedepartment.com/hunting/species/waterfowl>. Accessed August 2017.
- Oklahoma Department of Wildlife Conservation. 2017d. Oklahoma's Threatened and Endangered Species. Available online at <https://wildlifedepartment.com/wildlifemgmt/endorangeredspecies.htm>. Accessed August 2017.
- Oklahoma Department of Wildlife Conservation. 2017e. Wildlife Management Areas and Other Public Lands. Available online at https://www.wildlifedepartment.com/facts_maps/wmastate.htm. Accessed July 2017.
- Oklahoma Department of Wildlife Conservation. 2017f. Protection of the Bald Eagle. Available online at <https://www.wildlifedepartment.com/wildlifemgmt/eagleprotection.htm>. Accessed November 2017.
- Oklahoma Geological Survey. 2008. Geologic Hazards in Oklahoma. Available online at <http://www.ogs.ou.edu/pubsscanned/EP9p15hazards.pdf>. Accessed July 2017.
- Oklahoma Geological Survey. 2015. Statement on Oklahoma Seismicity. Available online at http://ogs.ou.edu/docs/statements/OGS_Statement-Oklahoma-Seismicity-2015-04-21.pdf. Accessed July 2017.
- Oklahoma Geological Survey. 2017. OGS Statement on 2017 USGS assessment of continued seismic hazards in Oklahoma. Oklahoma Geological Survey. Available online at http://wichita.ogs.ou.edu/documents/OGS_Statement_USGS_Hazard_Map_2017.pdf. Accessed September 2017.
- Oklahoma Historical Society. 2018a. Indian Territories. Available online at <http://www.okhistory.org/publications/enc/entry.php?entryname=INDIAN%20TERRITORY>. Accessed January 2018.
- Oklahoma Historical Society. 2018b. Settlement Patterns. Available online at <http://www.okhistory.org/publications/enc/entry.php?entryname=SETTLEMENTPATTERNS>. Accessed January 2018.
- Oklahoma Natural Heritage Inventory. 2017. Letter correspondence from T. Fagin (Oklahoma Natural Heritage Inventory) to Secretary Bose (Federal Energy Regulatory Commission). OBS Ref. 2017-051-FED-ERC. Dated February 6, 2017.
- Oklahoma Office of the Secretary of the Energy and Environment. 2017. Fact Sheet, Earthquakes in Oklahoma. Available online at <https://earthquakes.ok.gov/faqs/>. Accessed July 2017.
- Oklahoma Register. 2017. Title 165: Corporation Commission, Chapter 10: Oil and Gas Conservation. Effective September 11, 2017. Available online at <http://www.occeweb.com/og/DEO%20Guidance%20for%20OG%20Sources.pdf>. Accessed September 2017.
- Oklahoma Water Resources Board. 1999. Statewide Groundwater Vulnerability Map of Oklahoma. Technical Report 99-1. Available online at <https://www.owrb.ok.gov/studies/reports/gwvulnerability/entire-report.pdf>. Accessed July 2017.
- Oklahoma Water Resources Board. 2008. Water Instream Flow Assessment of Streams Draining the Arbuckle-Simpson Aquifer. Available online at https://www.owrb.ok.gov/util/pdf_util/Arbuckle%20MAY%20Hearing/Ex2_AS_Hearing_InstreamFlow.pdf. Accessed August 2017.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- Oklahoma Water Resources Board. 2009. Geochemistry of the Arbuckle-Simpson Aquifer. Available online at https://www.owrb.ok.gov/util/pdf_util/Arbuckle%20MAY%20Hearing/prehearing_docs/9-GeochemistryArbuckle-Simpson.pdf. Accessed July 2017.
- Oklahoma Water Resources Board. 2011. Wellhead Protection Areas: Vector Digital Data. Available online at <http://www.owrb.ok.gov>. Accessed July 2017.
- Oklahoma Water Resources Board. 2016. Oklahoma Water Quality Standards (Title 785, Chapter 45). Available online at http://www.owrb.ok.gov/util/rules/pdf_rul/current/Ch45.pdf. Accessed July 2017.
- Oklahoma Water Resources Board. 2017a. Water Quality Standards, About the Program. Available online at <https://www.owrb.ok.gov/quality/standards/standards.php>. Accessed August 2017.
- Oklahoma Water Resources Board. 2017b. Surface Water Data. Available online at http://www.owrb.ok.gov/maps/PMG/owrbdata_SW.html. Accessed August 2017.
- Oklahoma Water Resources Board. 2017c. Public Water Supply Approximate System Services Area Shapefiles. Available online at http://www.owrb.ok.gov/maps/PMG/owrbdata_WS.html. Accessed April 2017.
- O'Rourke, T. D. and M.C. Palmer. 1994. Feasibility Study of Replacement Procedures and Earthquake Performance Related to Gas Transmission Pipelines. National Center for Earthquake Engineering Research-94-0012.
- O'Rourke, T.D. and M.C. Palmer. 1996. Earthquake Performance of Gas Transmission Pipelines. Earthquake Spectra. Vol. 12, No. 3.
- Osborn, Noel I. and R.H. Hardy. 1999. Statewide Groundwater Vulnerability Map of Oklahoma. Oklahoma Water Resources Board Technical Report 99-I. Available online at <http://www.owrb.ok.gov/studies/reports/gwvulnerability/entire-report.pdf>. Accessed July 2017.
- OutdoorsOK. 2017. Oklahoma Lakes and Outdoors Information: Blue River, Oklahoma. Available online at <http://www.outdoorsok.com/oklahoma/blue/>. Accessed August 2017.
- Oxford, N. 2016. Oklahoma Puts Limits on Oil and Gas Wells to Fight Quakes. The New York Times (3/08/2016). Available online at <https://www.nytimes.com/2016/03/08/us/oklahoma-earthquakes-oil-gas-wells.html>. Accessed September 2017.
- PGP Valuation Inc. 2008. Updated Market Analysis – The Impact of Natural Gas Pipelines on Property Values. Available online at http://pstrust.org/docs/Pipeline_Impact_on_Property_Values.pdf. Accessed January 2017.
- Platt, J.R. 2013. Piping Plovers in Migration: Foraging for their Lives. Available online at <https://blogs.scientificamerican.com/extinction-countdown/piping-plovers-in-migration-foraging-for-their-lives/>. Accessed August 2017.
- PoliceOne. 2016. Police Department Directory. Available online at <http://www.policeone.com/law-enforcement-directory/>. Accessed December 2016.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- Polivika, K.M. and W.J. Matthews. 1997. Habitat Requirements of the Arkansas River Shiner, *Notropis girardi*. In: U.S. Fish and Wildlife Service. 2011. Arkansas River Shiner Fact Sheet. Final Report, Federal Aid Project No. E-33. Oklahoma Department of Wildlife Conservation. Oklahoma City, Oklahoma.
- RBN Energy, LLC. 2017. Will Natural Gas Production in the SCOOP/STACK be OK? Available online at https://rbnenergy.com/sites/default/files/static_pages/rbn_scoop_stack_preview_201702271.pdf. Accessed September 2017.
- Rextag, a Hart Energy Company. 2017. Global Energy GIS Database: United States Oil and Gas Wells GIS Data (Update 1021, Fall 2015). Accessed July 2017.
- RV Parks Review. 2016. Campground Search by State. Available online at <http://www.rvparkreviews.com/>. Accessed December 2016.
- RV Parks Review. 2017. Campground Search by State. Available online at <http://www.rvparkreviews.com/>. Accessed January and March 2017.
- Skinner, M. 2016. New Year, New Plays, New Plans. Oil and Gas Conservation Division, Oklahoma Corporation Commission (December 20, 2016). Available online at <https://earthquakes.ok.gov/wp-content/uploads/2016/12/12-20-16-OCC-News-Release.pdf>. Accessed September 2017.
- Skinner, M. 2017. Looking Ahead: New Earthquake Directive Takes Aim at Future Disposal Rates. Oil and Gas Conservation Division, Oklahoma Corporation Commission (February 24, 2017). Available online at <http://www.occeweb.com/News/2017/02-24-7%20FUTURE%20DISPOSAL.pdf>. Accessed September 2017.
- Soil Survey Staff. 2017a. Web Soil Survey. Natural Resources Conservation Service, U.S. Department of Agriculture. Available online at <http://websoilsurvey.nrcs.usda.gov/>. Accessed June 2017.
- Soil Survey Staff. 2017b. Official Soil Series Descriptions. Natural Resources Conservation Service, U.S. Department of Agriculture. Available online at <https://soilseries.sc.egov.usda.gov/>. Accessed June 2017.
- Southern Area Coordination Center. 2017. Interagency Coordination Centers. Available online at https://gacc.nifc.gov/sacc/state_dispatch.php. Accessed January 2017.
- Stubbs, K. and D. Martinez. 2017. Email communication on November 13, 2017, between J. Rieland (Environmental Resources Management), K. Stubbs (U.S. Fish and Wildlife Service), and D. Martinez (U.S. Fish and Wildlife Service).
- Terracon. 2017. Geotechnical Engineering Report: Calumet Compressor Station, Sholem Booster Station, and Bennington Compressor Station. Cheniere Doc. No. MSPLML-E-QU-RPT-00005.
- Tewksbury, J.J., D.J. Levey, N.M. Haddad, S. Sargent, J.L. Orrock, A. Weldon, B.J. Danielson, J. Brinkerhoff, E.I. Damschen, and P. Townsend. 2002. Corridors Affect Plants, Animals, and Their Interactions in Fragmented Landscapes. *Proceedings of the National Academy of Sciences, USA* 99: 12923–12926. Available online at <http://www.pnas.org/content/99/20/12923.abstract>. Accessed August 2017.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- Texas Parks and Wildlife Department. 2017. Interior Least Tern (*Sterna antillarum athalassos*). Available online at <https://tpwd.texas.gov/huntwild/wild/species/leasttern/>. Accessed August 2017.
- The Nature Conservancy. 2017. How We Work In Oklahoma. Available online at <https://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/oklahoma/howwework/index.htm>. Accessed July 2017.
- TheUS50.com. 2018. General Oklahoma State History. Available online at <http://www.theus50.com/oklahoma/history.php>. Accessed January 2018.
- TRC. 2016. Personal communication between N. Hudson, TRC, and N.H. Sunseson, PhD, Oklahoma Geological Survey. RE: Fossils in Oklahoma, December 13.
- TRIP. 2015. Rural Connections: Challenges and Opportunities in America's Heartland. Available online at http://www.tripnet.org/docs/Rural_Roads_TRIP_Report_May_2015.pdf. Accessed January 2017.
- U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0). Eds. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-20. U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.
- U.S. Bureau of Labor Statistics. 2015. Table 1. Incidence rates of nonfatal occupational injuries and illnesses by industry and case types, 2015. Available online at <https://www.bls.gov/news.release/osh.t01.htm>. Accessed September 2017.
- U.S. Census Bureau. 2000. Decennial Census 2000, Population, Housing Units, Area, and Density: 2000 – County – County Subdivision and Place (GCT-PH1). Available online at <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>. Accessed December 2016.
- U.S. Census Bureau. 2009. Statistical Abstract of the United States: 2010. Available online at <https://www.census.gov/library/publications/2009/compendia/statab/129ed.html>. Accessed January 2018.
- U.S. Census Bureau. 2010. Decennial Census 2010, Table GCT-PH1: Population, Housing Units, Area, and Density: 2010 – County – County Subdivision and Place Available online at <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml>. Accessed June 2017.
- U.S. Census Bureau. 2015a. 2011–2015 American Community Survey 5-Year Estimates: Total Population (Table B01003). Available online at <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml>. Accessed December 2016.
- U.S. Census Bureau. 2015b. 2011–2015 American Community Survey 5-Year Estimates: Per Capita Income in the Past 12 Months (Table B19301). Available online at <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml>. Accessed December 2016.
- U.S. Census Bureau. 2015c. 2011–2015 American Community Survey 5-Year Estimates: Selected Economic Characteristics (Table DP03). Available online at <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml>. Accessed December 2016.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- U.S. Census Bureau. 2015d. 2011–2015 American Community Survey 5-Year Estimates: Industry by Occupation for the Civilian Employed Population 16 Years and Over (Table S2405). Available online at <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml>. Accessed December 2016.
- U.S. Census Bureau. 2015e. 2011–2015 American Community Survey 5-Year Estimates: Selected Housing Characteristics (Table DP04). Available online at <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml>. Accessed December 2016.
- U.S. Census Bureau. 2015f. 2011–2015 American Community Survey 5-Year Estimates: Vacancy Status (Table B25004). Available online at <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml>. Accessed December 2016.
- U.S. Census Bureau. 2015g. 2011–2015 American Community Survey 5-Year Estimates: Race (Table B02001). Available online at <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml>. Accessed December 2016.
- U.S. Census Bureau. 2016. America's Families and Living Arrangements: 2016. Available online at <https://www.census.gov/data/tables/2016/demo/families/cps-2016.html>. Accessed August 2017.
- U.S. Census Bureau. 2017. Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2016. U.S. Census Bureau, Population Division. Release Date: March 2017. Available online at <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml>. Accessed August 2017.
- U.S. Department of Agriculture. 2017. Introduced, Invasive, and Noxious Plants. Available online at <https://plants.usda.gov/java/noxiousDriver>. Accessed July 2017.
- U.S. Department of Transportation, Federal Highway Administration. 2006. Federal Highway Administration Highway Construction Noise Handbook. Available online at <http://www.fhwa.dot.gov/environment/noise/handbook/09.htm>. Accessed July 2017.
- U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration. 2017a. Pipeline Incident 20 Year Trends. Available online at <http://www.phmsa.dot.gov/pipeline/library/data-stats/pipelineincidenttrends>. Accessed January 2018.
- U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration. 2017b. Significant Incident Consequences Summary Statistics. Available online at https://hip.phmsa.dot.gov/analyticsSOAP/saw.dll?Portalpages&NQUser=PDM_WEB_USER&NQPassword=Public_Web_User1&PortalPath=%2Fshared%2FPDM%20Public%20Website%2Fportal%2FSC%20Incident%20Trend&Page=Significant%20Incidents%20Consequences. Accessed July 2017.
- U.S. Energy Information Administration. 2017. Frequently Asked Questions. Available online at <https://www.eia.gov/tools/faqs/faq.php?id=73&t=11>. Accessed October 2017.
- U.S. Environmental Protection Agency. 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. The U.S. Environmental Protection Agency, Office of Noise Abatement and Control. March 1974.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- U.S. Environmental Protection Agency. 1989. Arbuckle-Simpson Aquifer of South Central Oklahoma Sole Source Aquifer; Final Determination ACTION: Notice. Available online at https://www.owrb.ok.gov/util/pdf_util/Arbuckle%20MAY%20Hearing/prehearing_docs/1-ArbuckleSSADesignation.pdf. Accessed July 2017.
- U.S. Environmental Protection Agency. 1994. Technical Document, Acid Mine Drainage, EPA 530-R-94-036, December. Available online at <https://www.epa.gov/sites/production/files/2015-09/documents/amd.pdf>. Accessed July 2017.
- U.S. Environmental Protection Agency. 2000. Abandoned Mine Site Characterization and Cleanup Handbook, EPA910-B-00.001, August. Available online at http://sites.umuc.edu/library/libhow/apa_examples.cfm?noprint=true#intext. Accessed July 2017.
- U.S. Environmental Protection Agency. 2011. Learn About Environmental Justice. Available online at <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice>. Accessed August 2017.
- U.S. Environmental Protection Agency. 2013. Level III Ecoregions of the Continental United States: Corvallis, Oregon. Available online at <https://www.epa.gov/eco-research/level-iii-and-iv-ecoregions-continental-united-states>. Accessed August 2017.
- U.S. Environmental Protection Agency. 2016. A Citizen's Guide to Radon. Available online at <https://www.epa.gov/radon/citizens-guide-radon-guide-protecting-yourself-and-your-family-radon>. Accessed April 2018.
- U.S. Environmental Protection Agency. 2017a. Cleanups in My Community. Available online at <https://www.epa.gov/cleanups/cleanups-my-community>. Accessed June 2017.
- U.S. Environmental Protection Agency. 2017b. EnviroFacts. Available online at <https://www3.epa.gov/enviro/>. Accessed June 2017.
- U.S. Environmental Protection Agency. 2017c. Sole Source Aquifers. Interactive Map. Available online at <https://www.epa.gov/dwssa>. Accessed July 2017.
- U.S. Environmental Protection Agency. 2017d. Water Quality Assessment and TMDL Tracking (ATTAINS) Tool. Available online at <https://www.epa.gov/tmdl/impaired-waters-and-tmdls-resources-tools-and-databases>. Accessed June 2017.
- U.S. Environmental Protection Agency. 2017e. Environmental Justice Showcase Communities by Region. Available online at <https://www.epa.gov/environmentaljustice/environmental-justiceshowcase-communities-region>. Accessed January 2017.
- U.S. Environmental Protection Agency. 2017f. Greenhouse Gas Emissions: Understanding Global Warming Potentials. Available online at <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>. Accessed July 2017.
- U.S. Environmental Protection Agency. 2017g. Monitor Values for Criteria Pollutants. Air Data. Available online at <https://www.epa.gov/air-data>. Accessed February 2017.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- U.S. Environmental Protection Agency. 2017h. National Ambient Air Quality Standards Table. Available online at <https://www.epa.gov/criteria-air-pollutants/naaqs-table#3>. Accessed January 2017.
- U.S. Fire Administration. 2016. National Fire Department Census. Available online at <https://apps.usfa.fema.gov/census/search>. Accessed December 2016.
- U.S. Fish and Wildlife Service. 1991. American Burying Beetle (*Nicophorus americanus*) Recovery Plan. U.S. Fish and Wildlife Service, Region 5. Concord, New Hampshire. Available online at https://ecos.fws.gov/docs/recovery_plan/910927.pdf. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2005. News Release – Critical Habitat Designated for Arkansas River Shiner. Public Affairs Office, Albuquerque, New Mexico. October 13, 2005. Available online at <https://www.fws.gov/mountain-prairie/pressrel/05-76.htm>. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2007. National Bald Eagle Management Guidelines. May 2007. Available online at <https://www.fws.gov/northeast/ecologicalservices/pdf/NationalBaldEagleManagementGuidelines.pdf>. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. Available online at <http://www.fws.gov/migratorybirds/>. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2011a. Whooping Crane Fact Sheet. August 2011. Available online at https://www.fws.gov/southwest/es/Oklahoma/Documents/TE_Species/Species%20Profiles/Whooping%20Crane.pdf. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2011b. Arkansas River Shiner Fact Sheet. August 2011. Available online at https://www.fws.gov/southwest/es/oklahoma/Documents/TE_Species/Species%20Profiles/AR%20River%20Shiner.pdf. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2011c. Eagle Guidelines: Bald Eagle Management Guidelines and Conservation Measures. Available online at <https://www.fws.gov/northeast/ecologicalservices/pdf/NortheastRegionBaldEagle.pdf>. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2013a. Salt Plains National Wildlife Refuge - Wildlife and Habitat. Available online at https://www.fws.gov/refuge/Salt_Plains/wildlife_and_habitat/index.html. Accessed November 2017.
- U.S. Fish and Wildlife Service. 2013b. Whooping Crane (*Grus Americana*). Available online at <https://www.fws.gov/southdakotafieldoffice/CRANE.HTM>. Accessed November 2017.
- U.S. Fish and Wildlife Service. 2014a. Rufa Red Knot Background Information and Threats Assessment. Supplement to Endangered and Threatened Wildlife and Plants; Final Threatened Status for the Rufa Red Knot (*Calidris canutus rufa*). U.S. Fish and Wildlife Service, Northeast Region, New Jersey Field Office. Pleasantville, New Jersey. Available online at <https://www.fws.gov/northeast/redknot/pdf/20141125 REKN FL supplemental doc FINAL.pdf>. Accessed August 2017.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- U.S. Fish and Wildlife Service. 2014b. American Burying Beetle Fact Sheet. April 2014. Available online at https://www.fws.gov/southwest/es/oklahoma/documents/te_species/species%20profiles/american%20burying%20beetle%20fact%20sheet%202014.pdf. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2014c. Oklahoma Ecological Services Field Office Migratory Bird and Eagle Impact Avoidance Measures for Actions Associated with Oil and Gas Projects. Available online at https://www.fws.gov/southwest/es/Oklahoma/Documents/TE_Species/Oklahoma%20Guidance%20for%20BGEPA%20and%20MBTA.pdf. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2016a. Three Decades of Conservation Efforts Lead to Recovery, Proposed Delisting of Texas, Oklahoma Songbird. Available online at <https://www.fws.gov/news/ShowNews.cfm?ref=three-decades-of-conservation-efforts-lead-to-recovery-proposed-&ID=35911>. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2016b. Least Tern (Interior Population) *Sterna antillarum* Fact Sheet. Available online at <https://www.fws.gov/midwest/endangered/birds/leastern/IntLeastTernFactSheet.html>. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2016c. American Burying Beetle: Additional Information. Available online at https://www.fws.gov/southwest/es/Oklahoma/ABB_Add_Info.htm. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2016d. American Burying Beetle Impact Assessment for Project Reviews. U.S. Fish and Wildlife Service Southwest Region, Oklahoma Ecological Services Field Office. March 2016. Available online at https://www.fws.gov/southwest/es/Oklahoma/documents/abb/surveying%20final/abb%20impact%20assessment%20for%20project%20reviews_30march2016_final.pdf. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2016e. IPaC Trust Resources Report. Midship (10-20-2016 CL). Generated October 20, 2016.
- U.S. Fish and Wildlife Service. 2016f. Official Species List. Provided by the Oklahoma Ecological Services Field Office on December 14, 2016. Consultation code 02EKOK00-2017-SLI-0585.
- U.S. Fish and Wildlife Service. 2017a. Tishomingo National Wildlife Refuge Oklahoma. Available online at <https://www.fws.gov/refuge/Tishomingo/>. Accessed July 2017.
- U.S. Fish and Wildlife Service. 2017b. Summary of telephone conversation between A. Cornell (TRC) and D. Martinez (U.S. Fish and Wildlife Service) dated February 1, 2017.
- U.S. Fish and Wildlife Service. 2017c. Letter correspondence from the U.S. Fish and Wildlife Service providing the list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project. Consultation Code: 02EKOK00-2017-SLI-1014. February 27, 2017.
- U.S. Fish and Wildlife Service. 2017d. Letter correspondence from the U.S. Fish and Wildlife Service providing the list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project. Consultation Code: 02EKOK00-2017-SLI-1015. February 27, 2017.

APPENDIX M (cont'd)

- U.S. Fish and Wildlife Service. 2017e. Information for Planning and Consultation. Available online at <https://ecos.fws.gov/ipac/>. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2017f. Black-capped Vireo (*Vireo atricapilla*). Available online at <https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=B07T>. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2017g. All about Piping Plovers. Available online at <https://www.fws.gov/plover/facts.html>. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2017h. Email correspondence between D. Martinez (Fish and Wildlife Biologist, U.S. Fish and Wildlife Service) and A. Cornell (TRC) dated February 9, 2017.
- U.S. Fish and Wildlife Service. 2017i. Piping Plover Critical Habitat Questions and Answers. Available online at <https://www.fws.gov/plover/q&a.html>. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2017j. Species Profile for American Burying Beetle (*Nicrophorus americanus*). Available online at <https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=I028>. Accessed August 2017.
- U.S. Fish and Wildlife Service. 2017k. Official Species List. Provided by the Oklahoma Ecological Services Field Office on January 3, 2017. Consultation code 02BKOK00-2017-SLI-0680.
- U.S. Fish and Wildlife Service. 2017l. National Wildlife Refuge System. About: Mission. Available online at <https://www.fws.gov/refuges/about/mission.html>. Accessed July 2017.
- U.S. Fish and Wildlife Service. 2017m. Fish and Aquatic Conservation. The National Fish Hatchery System. Available online at <https://www.fws.gov/Fisheries/nfhs/index.html>. Accessed July 2017.
- U.S. Fish and Wildlife Service. 2018. Telephone conversation and follow-up correspondence dated May 17 to 23, between A. Barstow (Fish and Wildlife Biologist, Oklahoma Ecological Services Field Office); E. Baum and J. Wachholder (Federal Energy Regulatory Commission); and M. Buckless and T. Lyons (Environmental Resources Management, Inc.).
- U.S. Geological Survey. 1995. U.S. Geological Survey – The Geology of Radon. Available online at <http://certmapper.cr.usgs.gov/data/PubArchives/radon/georadon/2.html>. Accessed April 2018.
- U.S. Geological Survey, National Geospatial Technical Operations Center. 2016. Geospatial data for police, fire and medical facilities. Available online at <https://ngtoc.usgs.gov>. Accessed December 2016.
- U.S. Geological Survey. 1996. Groundwater Atlas of the United States. Available online at <https://pubs.usgs.gov/ha/ha730/>. Accessed July 2017.
- U.S. Geological Survey. 2005. Preliminary integrated geologic map databases for the United States. Open-File Report 2005-1351, United States Geological Survey. Available online at <https://pubs.usgs.gov/of/2005/1351/>. Accessed July 2017.
- U.S. Geological Survey. 2006. Quaternary fault and fold database for the United States, United States Geological Survey. Available online at <https://earthquake.usgs.gov/hazards/qfaults/>. Accessed July 2017.

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APPENDIX M (cont'd)

- U.S. Geological Survey. 2014. United States National Seismic Hazard Maps: United States Geological Survey. Available online at <https://earthquake.usgs.gov/hazards/hazmaps/>. Accessed July 2017.
- U.S. Geological Survey. 2016. Seismic Hazard Map, 1% Probability of Exceedance in One Year, 2016. Available online at <https://earthquake.usgs.gov/hazards/induced/data.php>. Accessed July 2017.
- U.S. Geological Survey. 2017a. Mineral Resources Data System. Available online at <https://mrdata.usgs.gov/mrds/>. Accessed July 2017.
- U.S. Geological Survey. 2017b. Induced Earthquakes. Available online at <https://earthquake.usgs.gov/research/induced/overview.php>. Accessed July 2017.
- U.S. Geological Survey. 2017c. Seismic Hazard Map, 1% Probability of Exceedance in One Year, 2017. Available online at <https://www.sciencebase.gov/catalog/item/58ab074ee4b0ce4410e6cba2>. Accessed July 2017.
- U.S. Geological Survey. 2017d. Landslide Overview Map of the Conterminous United States, USGS Landslides Hazard Program. Available online at <https://landslides.usgs.gov/hazards/nationalmap/>. Accessed July 2017.
- U.S. Geological Survey. 2017e. The Public Land Survey System. Available online at https://nationalmap.gov/small_scale/a/plss.html. Accessed September 2017.
- U.S. Global Change Research Program. 2014. Climate Change Impacts in the United States. Available online at <http://www.globalchange.gov/browse/reports/climate-change-impacts-united-states-third-national-climate-assessment-0>. Accessed June 2017.
- U.S. Global Change Research Program. 2017. Detection and Attribution of Climate Change. *Climate Science Special Report: Fourth National Climate Assessment, Volume I, Chapter 3*. Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.). U.S. Global Change Research Program, Washington, DC, USA. pp. 114-132, doi: 10.7930/J01834ND.
- University of Oklahoma. 2016. Center for Spatial Analysis Data Warehouse. Available online at <http://geo.ou.edu/DataFrame.htm>. Accessed in December 2016.
- USACops. 2016. Police Departments, Sheriffs' Offices, and Other Law Enforcement Agencies. Available online at <http://www.usacops.com/>. Accessed December 2016.
- Walsh, F.R. and M.D. Zoback. 2015. Oklahoma's Recent Earthquakes and Saltwater Disposal. *Scientific Advance*, 1-9, doi:10.1126/sciadv.1500195.
- Walsh, F.R. and M.D. Zoback. 2016. Probabilistic assessment of potential fault slip related to injection-induced earthquakes: Application to north central Oklahoma, USA. *Geological Society of America*. Available online at https://scits.stanford.edu/sites/default/files/walsh_zoback_in_press_g38275_v1.pdf. Accessed September 2017.
- Weingarten, M., S. Ge, J.W. Godt, B.A. Bekins, and J.L. Rubinstein. 2015. High-rate Injection is Associated with the Increase in U.S. Mid-continent Seismicity. *Science*, 348:6241, 1336-1340. doi:10.1126/science.aab1345.

20180621-3006 FERC PDF (Unofficial) 06/21/2018

APPENDIX M (cont'd)

- Wilde, G.R., T.H. Bonner, and R. Patino. 2000. Habitat Use and Ecology of the Arkansas River Shiner and Speckled Chub in the Canadian River, New Mexico and Texas. Unpublished Report for the U.S. Fish and Wildlife Service. In: U.S. Fish and Wildlife Service. 2011. Arkansas River Shiner Fact Sheet. Texas Tech University. Lubbock, Texas.
- Wilkins, Kent. 1998. Hydrologic Report of the Woodbine, Marietta, and Texoma Minor Bedrock Groundwater Basins, and the Haworth Terrace and Little River Alluvial and Terrace Minor Groundwater Basins. Available online at https://www.owrb.ok.gov/studies/reports/reports_pdf/tr99_2_WoodbineMinorGW.pdf. Accessed July 2017.
- Willemsens, K.A. 2015. Soil Preferences of Nicrophorus Beetles and the Effects of Compaction on Burying Behavior. Master's Thesis. University of Nebraska, Lincoln, Nebraska. Available online at <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1113&context=natresdiss>. Accessed August 2017.
- Yeck, W.L., G.P. Hayes, D.E. McNamara, J.L. Rubinstein, W.D. Barnhardt, P.S. Earle, and H.M. Benz. 2017. Oklahoma Experiences Largest Earthquake during Ongoing Regional Wastewater Injection Hazard Mitigation Efforts. Geophysical Research Letters, 44, doi:10.1002/2016GL071685.

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APPENDIX N
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